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Government of Saskatchewan

Annual Report 1991-92

Saskatchewan Highways and Transportation

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Mission

Working Together for Excellence in Transportation

Our Goals Are

- *To be a leading government department in the delivery o services and programs.*
- *To maximize transportation' contribution to the social an economic development of the province.*
- *To be respected for our expertise and innovation in transportation.*
- *To build a working environment which develops a sense of pride and persona achievement.*
- *To communicate and consult openly and effectively.*

Letter of Transmittal

Minister of
Highways and
Transportation

SASKATCHEWAN

Legislative Building
Regina, Saskatchewan S4S 0B3
(306) 787-6447

Her Honour The Honourable Sylvia O. Fedoruk, O.C., S.O.M.
Lieutenant-Governor of Saskatchewan

Your Honour:

It is a pleasure to submit the 1991-92 Annual Report for Saskatchewan Highways and Transportation.

Yours sincerely,

Bernhard H. Wiens

Saskatchewan

Saskatchewan Highways and Transportation

Deputy Minister

1855 Victoria Avenue
Regina, Canada
S4P 3V5

April 1,1992

The Honourable Bernhard H. Wiens.
Minister of Highways and Transportation

Sir:

It is my pleasure to present the annual report of Saskatchewan Highways and Transportation for the fiscal year ending March 31, 1992. This report contains a review of all department activities.

Emphasis continues to be placed on the construction and maintenance of higher traffic volume highways.

The department provided grain producers with information about the federal government "Transportation Talks" meetings by publishing and distributing "Grain Transportation - A Saskatchewan View".

Discussions continued with Provincial/Territorial and Federal officials to establish a National Highway Policy. At the Premier's Conference on the economy in February Premier Roy Romanow raised the issue of capital spending on highways to stimulate the economy. A Federal Government response is expected by mid 1992.

The department participated in several studies to assess past initiatives and to identify directions for the future.

ADI Ltd. was retained to prepare a study by June 1992 analyzing total transportation costs associated with alternative scenarios for operating branchlines with rescinded protection orders.

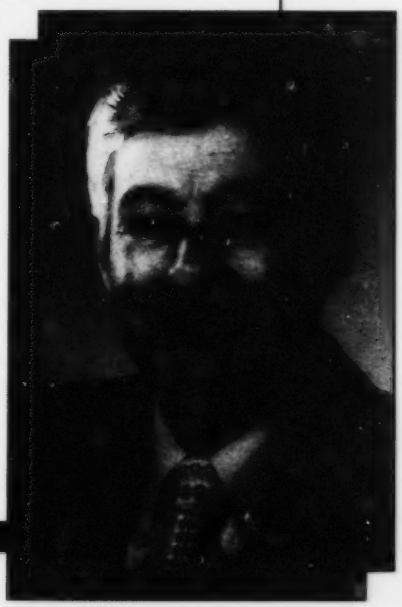
An interim report evaluating the Southern Rails operation with the road/rail power unit was completed by Travacon Research Ltd. and Edmar Services. The report indicated that Southern Rails, put into service last year, was providing better and less costly service to its customers than previously provided by CN and CP.

Department staff continue to be actively involved in both the United States and Canadian Strategic Highway Research Programs.

The department expended much effort related to the Fair Share initiative. The department also completed preparation in anticipation of the Freedom of Information and Privacy Act.

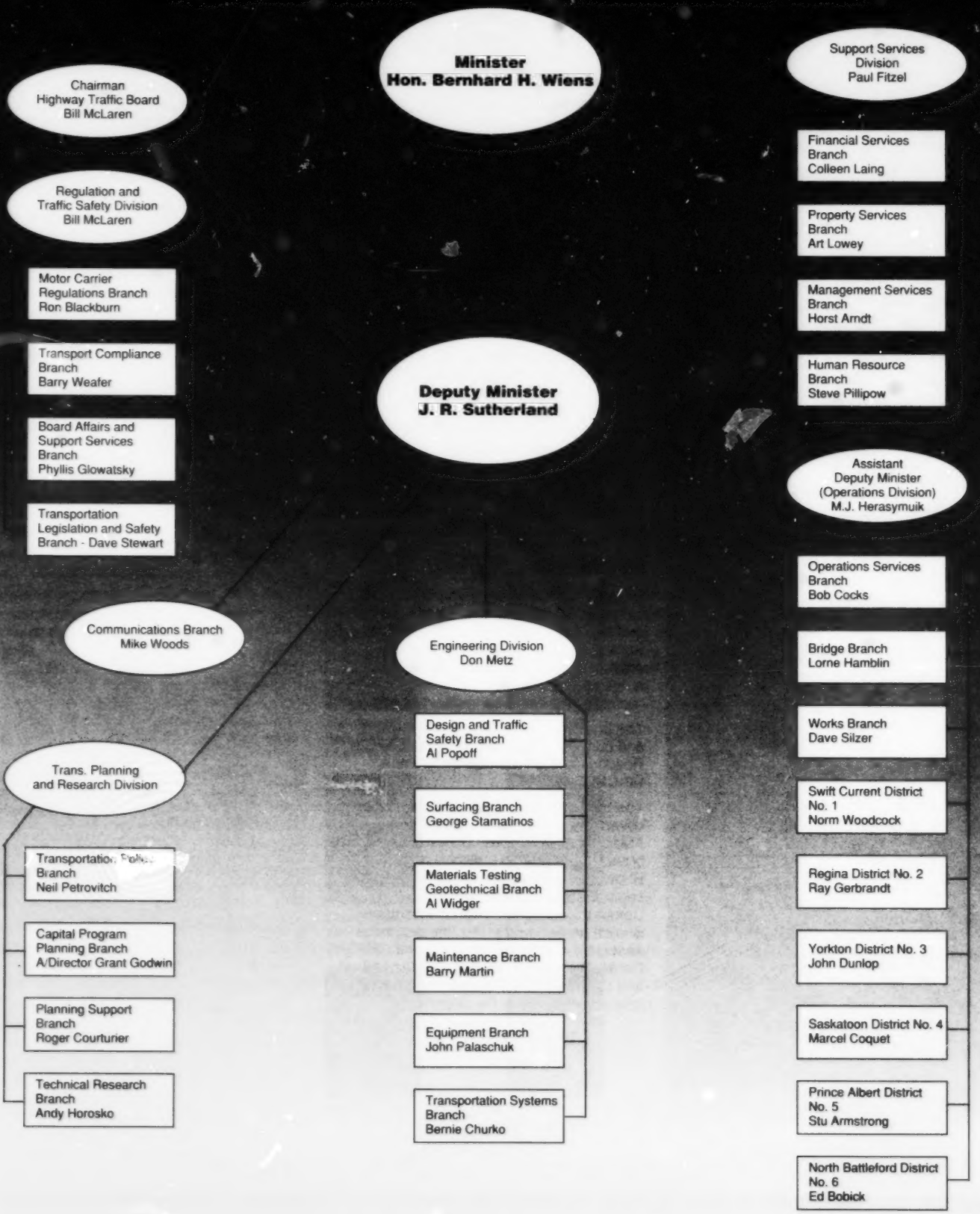
The department worked with Transmode Consulting in preparing to implement the first major department restructuring in over 20 years. This is being done to better position the department to meet the realities of the 1990's. This restructuring is expected to be completed by mid 1992.

Department staff are to be commended for their dedicated efforts to provide the travelling public of this province with safe and efficient transportation services.



J.R. Sutherland
Deputy Minister

Organization Chart as of March 31, 1992



Communications Branch

The focus of Communications Branch is to communicate programs, policies and accomplishments consistent with the department's mission. This communication will result in a public informed about the purpose and services provided by Highways and Transportation.

Communications Branch has two mandatory responsibilities:

- to co-ordinate the production and distribution of official and statutory publications.
- to provide a central information service for public inquiries.

Branch staff set and adhere to these objectives:

- effective communication of interbranch activities, department policies, and changing trends in the transportation industry to department employees, special interest groups and the general public.
- gathering and assessing information assisting in the development of programs and projects to be communicated to the public.

Highlights

Orange Zone highway worker safety campaign, Winter Hotline, Road Restriction and Salvage of Hay advertising programs were continued. There was also co-ordination of special events and a wide range of print materials. The branch facilitated the Clear Language Program.

The branch participated in annual events and conventions including Saskatchewan Roadbuilders annual conference and WACHO.

The branch contributed to the publication of several reports including Grain Transportation - A Saskatchewan View. The branch co-ordinated a display at the Ag Ed Showcase at Agribition with Transportation Legislation and Safety Branch. Communications and Human Resource Branch participated at the Interprovincial Association on Native Employment (IANE) Career Symposium display in Prince Albert and La Ronge. Both events represented first time participation by the department.

The branch issued 50 media releases and maintained a weekly department wide clipping service and electronic (radio/television) monitoring service. Department speeches were written and/or co-ordinated through the branch. Printing activities included co-ordination and production of 500,000 copies of the 1992 Official Highway Map, department 1990-91 annual report, and the department staff publication, In Motion.

Operations Division

Bernhard H. Wiens
Minister
Highways and Transportation

J.R. Sutherland
Deputy Minister

The Operations Division is responsible for the management and operation of transportation facilities and delivery of program services. The mandate of the division is carried out by staff located in six decentralized district offices located throughout the province and three head office branches.

The objective was to complete 278 km of grading and 570 km of paving. The actual accomplishments were 263 km of grading and 509 km of paving. Inclement weather during June and early July prevented the attainment of the paving objective. Many significant improvements were carried out on the highway system which are listed in the report. Major emphasis is being placed on resurfacing of the paved highway system in order to protect the department's investment.

The level of service objectives in maintenance of the highway system were met or exceeded at a lower cost than budgeted. Weather conditions, inventory control and the use of new technology were contributing factors to the cost savings.

Division staff are to be commended for the efficiency improvements that were made in program delivery. Many innovative ideas were put into practice resulting in effective use of limited resources.

Details of specific programs and accomplishments are provided in the following individual branch and district reports.

M.J. Herasymuik
Assistant Deputy Minister
(Operations)

M.J. Herasymuik
Assistant Deputy
Minister (Operations)

Bob Cocks
Operations
Services Branch

Lorne Hamblin
Bridge Branch

Dave Silzer
Works Branch

Norm Woodcock
Swift Current
District No. 1

Ray Gerbrandt
Regina
District No. 2

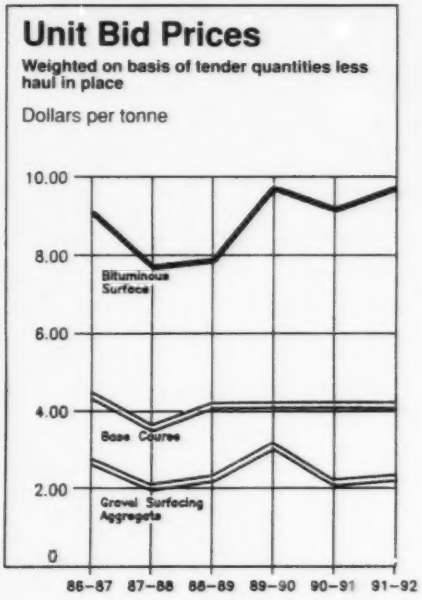
John Dunlop
Yorkton
District No. 3

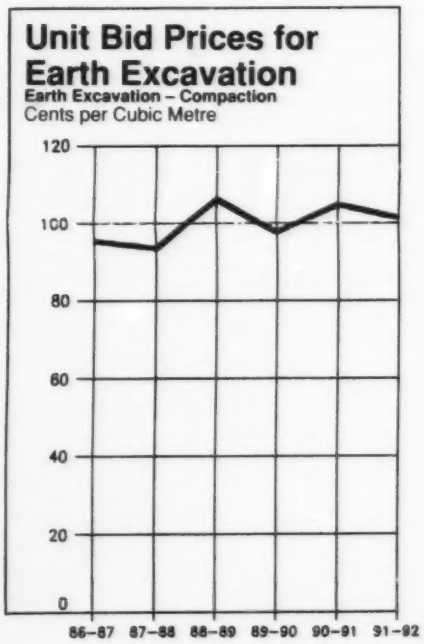
Marcel Coquet
Saskatoon
District No. 4

Stu Armstrong
Prince Albert
District No. 5

Ed Bobick
North Battleford
District No. 6

Operations Services Branch





Operations Services Branch provides executive, technical and financial services to the Operations Division.

Major Activities

Management of centralized activities related to tendering, scheduling and contract administration.

Development and control of the department's annual capital and maintenance programs and budgets.

Administration of purchasing construction and maintenance materials.

Co-ordination of cost-shared programs.

Tenders

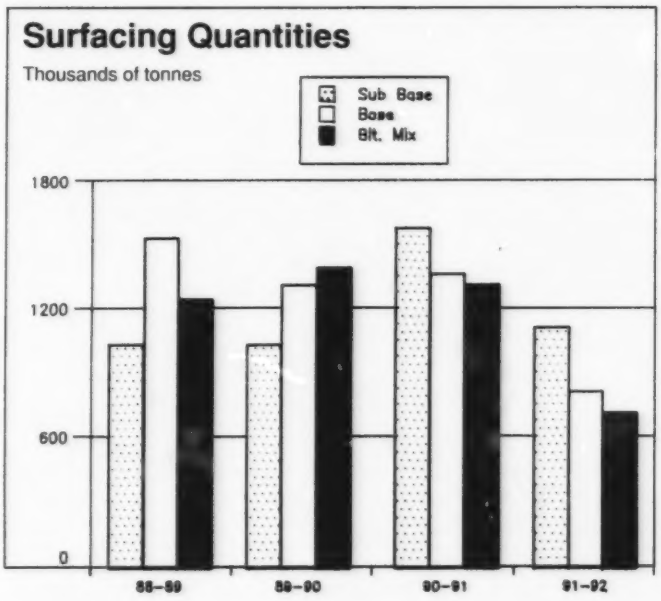
98 construction tenders valued at $49.2 million were awarded during 1991-92, 10 more contracts were tendered than in the previous year. The value of contracts awarded increased by $9.3 million.

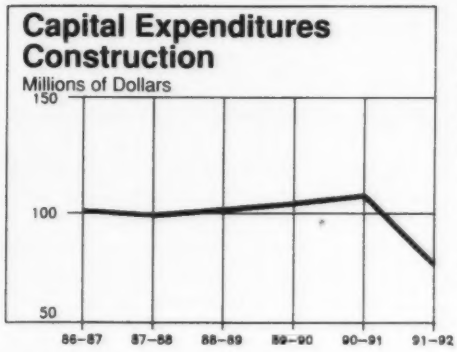
In addition, 28 maintenance mowing tenders valued at $776,700 were awarded. One less mowing tender was issued than in the previous year.

Contracts are tendered throughout the year to provide balanced workloads for contractors. In the fall and winter, emphasis is placed on processing aggregates so that much of the hauling can be done in the winter to minimize damage to haul routes and to create winter work.

Unit bid prices for bituminous surface course increased and earthwork decreased compared to the previous year.

The unit price for base course and gravel surfacing aggregate remained the same.





Grading

The amount of earth excavation work completed during the year was 5 784 000 m^3.

There were 263 km of new construction completed with 9 km of grading work underway at year end.

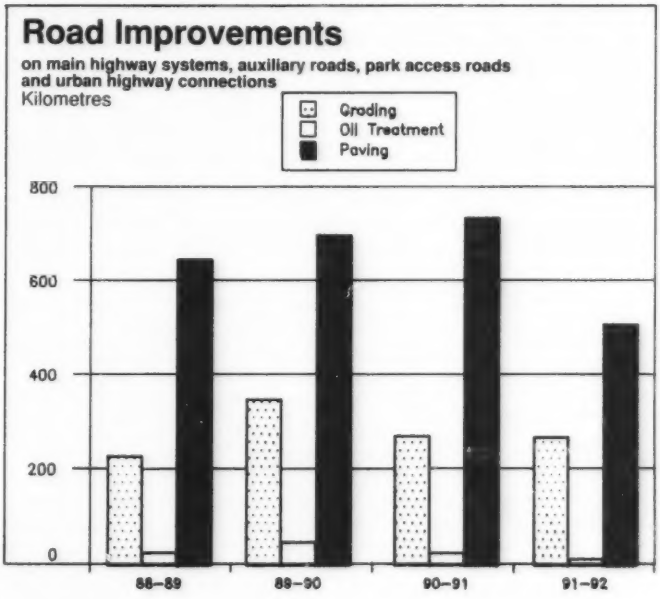
Surfacing

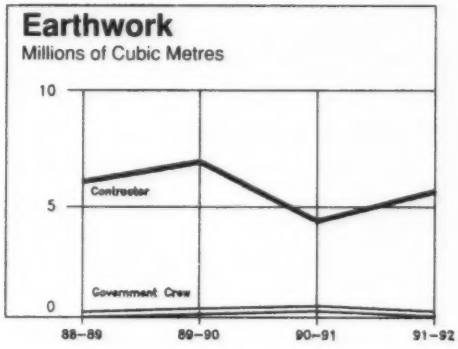
The quantity of bituminous mix on contracts in 1991-92 decreased to 714 582 tonnes from 1 293 147 tonnes. The quantity of sub-base and base material used in 1991-92 decreased to 1 938 900 tonnes from 2 953 436 tonnes in 1990-91.

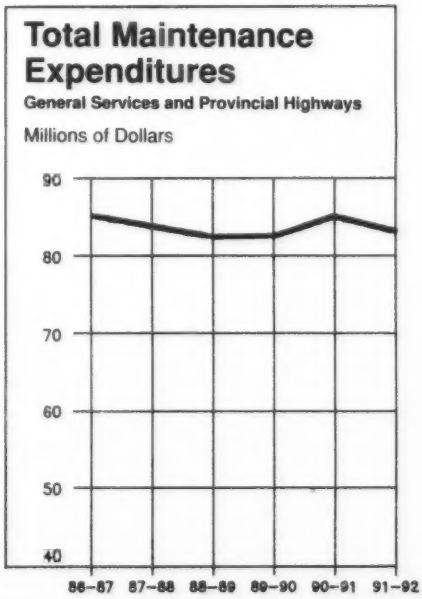
During the year 12 km of oiling, 25 km of pavement C, 130 km of new pavement and 354 km of pavement rehabilitation were completed.

Air Transportation

37 local governments participated in the Airport Assistance Program administered by the branch. The department provided $112,069 in assistance under the program. An additional $389,214 in capital costs was spent at seven provincial airports.







Transportation Assistance Programs

Operations Services Branch administers programs which assist in providing public transportation services in rural Saskatchewan.

In 1991-92 Saskatchewan Highways and Transportation provided $233,721 in funding to support nine routes under the Rural Transportation Assistance Program.

An additional $87,488 was provided to support two northern feeder service routes to the communities of Deschambault Lake, Sandy Bay and Pelican Narrows.

The Rural Bus Subsidy Program provided $144,690 in funding to support four routes served by private carriers.

Other Highlights

The department provided lighting at four roadway locations, 27 highway intersections at a cost of $332,383.

221,113 calls were handled on the department's Hotline Winter Road Information Service.

279 purchase orders for construction and maintenance materials valued at $24,276,017 were processed.

904 payments to contractors were processed totalling $49,334,185.

Bridge Branch

The Bridge Branch is responsible for the bridge component of the highway infrastructure.

The branch successfully carried out within its allotted funding level all the bridge programs scheduled for 1991-92. The highlights of these programs include:

- Rehabilitation of 8 bridges;
- Replacement of 9 bridges;
- Rehabilitation and strengthening of one bridge;
- Safety improvements at 7 bridge sites;
- Detailed inspection of 252 bridges;
- Repair of 136 bridges.

Maintenance

Six bridge deck restoration projects were undertaken, bringing the total completed to 61. This program is now 65% complete.

The detailed annual inspection and the minor repair programs continue to ensure an acceptable level of serviceability by the bridge inventory. The branch also continued to work with district staff to visually inspect all highway bridges to ensure they are safe for use by the public.

The branch initiated a maintenance painting program for steel bridges, repainting the steel components on two overpasses located near Moose Jaw. With 30 bridges to be repainted, this program will continue through and beyond the next decade.

Construction

Five bridges were replaced within the spot improvement program, two with bridges and three with culverts. This program is in its infancy, and will expand with the increasing need to replace bridges constructed subsequent to the Second World War.

The department's crews constructed two large bridges associated with the Rafferty Alameda project.

Design

The branch provides the structural design resource for the department's need in the areas of bridges, large culverts, sign supports and the equipment fleet. Designs were completed during the year for 20 projects.

The design responsibility also includes vehicle weight assessments and input to industry requests associated with bulk commodity hauls and single trip permits. This input was provided on over 1,000 occasions. The demand for this input is increasing every year.

The branch also identified needs for new major bridges on Highway No. 4 over the North Saskatchewan River, and Highway Nos. 2 and 15 over the South Saskatchewan River. These bridges will have to be programmed during the next decade.

Works Branch

Works Branch functions in four main areas: grading, surfacing, bridges and winter road construction. The branch provides these and other specialized construction services for the department and other government departments and agencies.

The branch employs between 75 and 100 people during the construction season. These include equipment operators, truck drivers, plant operators, cooks, administrative personnel and supervisors. The nature of work usually requires people to be away from home for long periods of time, working out of mobile self-contained camps.

Grading Section

One grading crew moved 256 445 m3 of earth material with the use of private and government equipment. Work was completed for Prince Albert District No. 5 and Yorkton District No. 3.

Surfacing Section

One surfacing crew completed various projects using sand/sulphur/asphalt mix throughout the province. There were 13,046 depressions filled on various highway surfaces requiring 1148.91 tonnes of sand/sulphur/asphalt mix which consisted of 5,471 batches.

Bridge Section

The four bridge crews worked on 30 construction projects and repaired 153 bridges for the Department of Highways and Rural Development. A total of six bridges had 4 902 m2 of major deck repairs, Cathodic protection, waterproofing and bridge strengthening done in Saskatoon, North Battleford and Prince Albert Districts.

Winter Roads

42 km of winter road was constructed to Wollaston Post over Wollaston Lake from Hidden Bay on Highway No. 905.

Training

Works Branch completed 116 man days of training in management, equipment repair and safety.

Swift Current District

The following accomplishments of the Swift Current District are due to the dedication of the 220 employees in the Administration, Construction, Design, Maintenance, and Materials Sections in the district.

Maintenance

- Maintenance activities were carried out by 25 section crews, three sign crews and one landscape crew.
- Normal road repairs included:
  8.4 million square metres of spot sealing
  231 700 square metres of deep patching
- Materials used include:
  13.1 million litres of liquid asphalt
  60 140 tonnes of bituminous mix
  227 500 tonnes of crushed aggregate
  2 980 tonnes of screened aggregate
  8 330 tonnes of salt for ice control
- Contracts tendered:
  Three contracts for the seal coating of 395 km of oil treated and paved surfaces
  Two contracts for blading of 108 km of gravel surfaced roads
  Seven contracts for mowing of 8 280 hectares of right of way
  Also contracted were 211 200 tonnes of repair aggregate and 41 000 tonnes of bituminous mix
- Miscellaneous:
  Three new sign corridors were established
  The hotline handled 10,500 calls
  Repair depots in Swift Current and Rosetown provide mechanical service for 327 power and sundry pieces of equipment

Construction

- Construction included:
  20 contracts supervised, 57 km of subgrade construction completed with 4 km in progress.
- Surfacing included:
  28 km of surfacing completed, and 1.35 km. in progress.
  57 km of resurfacing as part of department rehabilitation program.
- Crews supervised 401 km of seal coat involving three contracts.
- Major construction projects include:
  Grading Highway No. 21; from the U.S. border, north.
  Grading Highway No. 31: from Salvador to west of Denzil.
  Grading Highway No. 342; from Beechy to highway #42.

  Resurfacing Highway No. 1; from Gull Lake to west of Tompkins.
  Resurfacing Highway No. 4; from south of Kyle to Sanctuary.
  Resurfacing Highway No. 15; from Milden east (End-Product-Specifications).

  Surfacing Highway No. 21; from Mendham to Leader, and from south of Kindersley to Kindersley.

  Grading and surfacing Highway No. 1; near Parkbeg, to improve safety.

Design and Materials

- 21.6 km of preliminary field survey was completed.
- 33.4 km of subgrade design, primarily on Highway No. 4 south of Cadillac; Highway No. 37 at Climax Border Crossing; and Highway No. 19 south of Hodgeville.
- Designs for various safety improvement projects were completed. (sight triangle and sight distance improvements, cable and bridge barriers, and intersection area lighting).
- Detailed location studies were completed for sections of Highway No.13 near Scotsguard and Highway No.42 near Brownlee.
- A Functional Layout study was completed for a future interchange on Highway No. 1 west of Swift Current.
- 126 roadside development and utility permit requests,including 28 for roadside subdivisions, were assessed.
- The district lab carried out 6,651 individual tests on soil and gravel samples.
- 40 gravel pits were surveyed and plans updated. 21 pits were retested confirming over 302 600 m3 of granular material.
- Five new sources containing 293 300 m3 of gravel and 69 000 m3 of sand were located.
- 54 gravel permits were issued to individuals, rural municipalities and other agencies for extraction from department owned pits.

Highlights

- Installation of Intersection Area Lighting at the Junction of Highway No. 1 and Highway No. 37 at Gull Lake.
- Capacity improvement at Junction Highway No. 4 and 7 at Rosetown.
- Grading and Paving at the Saskatchewan/Alberta border on Highway #1, was completed to accommodate a "Welcome to Saskatchewan Sign".
- Work was started on Grading and Paving at the U.S./Saskatchewan border to accommodate a new border crossing facility.

Regina District

The following are the accomplishments of Regina District during the past year involving Maintenance, Construction, Design and Materials Sections with support provided by district Administration.

Maintenance

- Maintenance activities were carried out by 34 section crews and one special crew.
- Normal road repairs included:
  - 5 400 000 square metres of spot seal
  - 54 800 square metres of deep patching
  - 520 000 square metres sprayed with asphalt
- Materials used included:
  - 9 300 000 litres of liquid asphalt
  - 71 700 tonnes of bituminous mix
  - 229 000 tonnes of crushed gravel
  - 18 100 tonnes of screened gravel
  - 14 500 tonnes of salt for snow and ice control
- Contracts tendered included:
  - Three seal coat contracts on 366 km of thin membrane and pavement surfaces
  - Two contracts for the blading of 82 km of gravel surface
  - Eleven contracts for the mowing of 8 300 hectares
  - One contract for filling 105 000 metres of pavement cracks with rubberized asphalt
  - 169 000 tonnes of repair gravel was crushed and stockpiled
  - 65 600 tonnes of bituminous repair mix was stockpiled
- Permits issued for private works on or near highway right-of-way included:
  - 146 permits for utility crossings
  - 29 permits for approaches and buildings
  - 28 permits for private signs
- Eight more sign corridors were established
- The winter road information hotline handled over 145,000 calls from November to March
- The equipment repair depots in Moose Jaw and Weyburn provided service for over 450 power units and various sundry equipment.

Construction

- 28 contracts were supervised by the construction section including:
  - 23.4 km of subgrade construction
  - 28 km of new pavement surface
  - 103.7 km of resurfacing
  - 465 km of seal coat surface treatment.
- Major construction accomplishment's included:
  - Resurfacing of the eastbound lanes of Highway No. 1 from Moose Jaw to Regina
  - New construction of Highway No. 47 south of Estevan
  - Reconstruction of Highway No. 2 from Tuxford to the Buffalo Pound causeway.
- Projects of note included:
  - Overlay of 48 lane-km of Highway No. 1 east of Regina using new technology of polymer-modified microsurfacing
  - Addition of a third lane on the Regina By-pass at Wascana Parkway to handle peak traffic flows to the University.

Design

- 76 km of field survey was completed
- 82 km of subgrade design was completed including:
  - Highway No. 1 from Broadview to Grenfell
  - Highway No. 1 from Wolseley to Sintaluta
  - Highway No. 2 north of Buffalo Pound
  - Highway No. 33 from Kronau to Regina
  - Highway No. 47 south of Estevan
- 14 rehabilitation projects were assessed covering some 258 km.

Materials

- 10 surfacing and pavement rehabilitation designs and nine asphalt mix designs were completed.
- Material testing completed included:
  - 64 km for new subgrade construction
  - 12 km of existing subgrade
  - 32 km for earth borrow
  - 6 new gravel pits were tested and 26 old ones retested with plans updated on 32 pits
- The addition and deletion of gravel pits included:
  - 542 300 cubic metres of gravel and 1 106000 cubic metres of sand was found
  - 274 160 cubic metres of gravel and 91 115 of sand was used by the department
  - 49 permits were issued for 99 500 cubic metres of gravel used by municipal agencies
- Checked 26 quarters of crown land and 5 quarters of private land for possible sand and gravel to be reserved.

Other Accomplishments

- Miscellaneous works included:
  - The upgrading of a historical site south of Regina
  - Five perforated pipes were drilled horizontally into a high embankment near Aylesbury to control settlement.
  - Curbing was replaced on the Highway No. 33 in Regina
  - Erosion repairs on Highway No. 35 near Fort Qu'Appelle.
- Safety improvements included:
  - The installation of flashing lights on Highway No. 1 near Indian Head and on Highway No. 13 near Stoughton.
  - The replacement of a cable strung overhead light on Highway No. 1 near Moose Jaw.
  - Upgrading of two bridge barriers on Highway No.s 334 & 377.
- Landscaping included:
  - The planting of trees and shrubs at the Highway No. 1 and Victoria Ave. interchange.
  - Three gravel pits were landscaped and abandoned.
- Delineation lights were installed at five intersections and area lighting was installed at the Highway No. 11 - Pasqua St. intersection and the exit and entrance ramps off Highway No. 11 to Condie.
- Maintenance and operation assistance was provided to eight communities for their airports.
- Two km were tested for the effect of salt on the environment.

Yorkton District

The following are the accomplishments of Yorkton District during the past year involving Maintenance, Construction, Design, and Materials sections with support provided by district Administration.

Maintenance

- Maintenance activities were carried out by 19 section crews.
- Normal road repairs included:
  3.4 million square metres of spot seal
  67 150 square metres of deep patching
  127 214 square metres of flushing
- Materials used included:
  5.1 million litres of liquid asphalt
  33 595 tonnes of bituminous mix
  141 860 tonnes of crushed aggregate
  4 800 tonnes of screened aggregate
  8 000 tonnes of salt for ice and snow treatment
- Contracts tendered:
  One contract for seal coat on 239.15 km of oil treated surfaces and pavements.
  Three contracts for blading 219.4 km of gravel surfaces
  Nine contracts for mowing 5,475.8 hectares of right of way
  Also contracted were 101 000 tonnes of repair aggregate and 35 754 tonnes of bituminous mix.
- Permits issued for private works on or near the right-of-way included:
  9 permits for approaches
  20 permits for road side development
  1 permit for a private sign
- Winter Hotline handled 3,673 calls from November to March
- The Repair Depot in Yorkton provided service for 255 power units and sundry equipment.

Construction

- Construction included:
  15 contracts supervised
  63 km of surfacing with 45 km carried over to 1992-93
- Surfacing included:
  32 km of resurfacing as part of the department rehabilitation program
- Crews supervised 217 km of seal coat involving two contracts
- Major reconstruction projects included:
  Resurfacing of Highway No. 49 from West of Preeceville to Hazel Dell
  Resurfacing of Highway No. 8 from Qu'Appelle Valley to North Junction of Highway No. 22
  Surfacing of Highway No. 9 from North of Preeceville to Usherville
  Surfacing of Highway No. 15 from Junction with Highway No. 35 to West of Lestock
  Grading and surfacing of Highway No. 349 from Archerwill to 11.85 km east.

Design

- 12 km of subgrade design was completed on Highway No. 349, west of Junction Highway No. 38
- 3 rehabilitation projects were assessed covering 40 km.

Materials

- Granular Location:
  Identified 35 new granular deposits
  Retested 12 existing pits
  Resurveyed and updated 21 pits
  Verified 2,442,700 m3 of new granular material of which
  1,290,800 m3 is for 18 municipalities on a custom work basis.
- Granular Materials Usage:
  Used 521,979 m3 for District Construction and Maintenance
  issued 11 permits for 9,496 m3 of granular materials
- Sampling and Testing
  Assessed borrow pit material for 2 projects
  Completed 2 asphalt mix designs
  Performed various tests on 5,200 samples
  Participated in research on pavement stripping.

Highlights

- Major surfacing and resurfacing of subdivision and campground roads in Greenwater Provincial Park
- Replacement of large diameter culverts at two locations; West of Kandahar and North of Kamsack
- Loadometer site constructed North of Moosomin
- Delineation lights were installed at six locations
- Safety improvements included:
  - Construction and surfacing of four intersection treatments
  - Flattening of highway sideslopes on Highway No. 38 from Perigord Access to Junction Highway No. 349
  - Vertical alignment improvements on sections of Highway No. 55, West of Junction Highway No. 9
- Major shareable works included:
  - Funding provided to assist airport operation and maintenance in six communities

Saskatoon District

The following are the accomplishments of Saskatoon District during the past year involving Maintenance, Construction, Design and Materials Sections with support provided by District Administration.

Maintenance

• Deep Patching	4592	m^2
• Thermo Patching	80	km
• Purchased Liquid Asphalt	7 665 987	L
• Seal Coat on Paved Highways	53	km
• Seal Coat on Oil Treatment	150	km
• Stockpile Bituminous Mix	27 734	t
• Machine Patching	18 616	t
• Flushing	32	km
• Seeding Right-Of-Way	280	ha
• Mowing By Contract	3350	ha
• Contract Right-Of-Way Ditch Cleaning	742	km
• Spring Clean Up Around Saskatoon	15	km

Winter Maintenance Usage:

• Calcium Chloride Purchased	143 952	L
• Mixed Cal-Treat Sand For Ice Control	7 500	t
• Salt Purchased	11 303	t

The Saskatoon Road Information Service (Hotline) handled 52,897 telephone calls throughout the winter.

Construction

Construction included:
- 17 contracts supervised
- 11.1 km of subgrade construction completed

Surfacing included:
- 2.9 km of surfacing completed
- 31.6 km of resurfacing as part of the department rehabilitation program

Crews supervised 203 km of seal coat involving one contract.

Major reconstruction projects include:
- Completed the surfacing of the new four lane section of No. 16 Highway from Dalmeny to Langham.
- Completed the surfacing of the new median at Langham scale site.

Design

Design included:
- Two rehabilitation projects were assessed covering 48 km.
- 500 km of district highways were reviewed for safety deficiencies

Materials

Gravel Location
- tested two new sand/gravel deposits
- retested 18 sources of aggregate
- verified 480 000 m^3 of gravel and 330 000 m^3 of sand, at a cost of 17.6¢/m^3
- checked 71 parcels of Crown land proposed for sale

Lab
- completed six Marshall mix design
- completed 2700 assorted tests
- analyzed 276 salt samples
- acted as referee Lab for 3 E.P.S. projects, completing 33 individual tests

Technical
- completed six GPER reports
- compiled three surfacing designs
- completed 11 rehab. designs
- monitored the Elbow Harbour access road failure
- continued to monitor the McCloy Creek crossing on C.S. 41-01
- assessed failures of C.S. 15-12, 43-03 and 14-19

Miscellaneous

- The lab supervisor chaired a standing committee reviewing and revising standard test procedures
- Lab staff participated in the annual mini-mix exchange
- Lab staff assessed time effects on extraction results (asphalt concrete)
- Lab equipment was updated and improved
- Field staff modified the coring machine to permit remote operation - enhancing health and safety concerns

Highlights

- New salt bin was constructed at Dafoe
- Surfacing of new median Langham scale site
- 270 000t of pit run aggregate hauled over the ice of the North Saskatchewan River

Prince Albert District

The following are the accomplishments of Prince Albert District during the past year involving Maintenance, Construction, Design and Materials sections with support provided by district Administration.

Maintenance

- Maintenance activities were carried out by 32 section crews and one special crew.
- Normal road repairs included:
  3.0 million square metres of spot seal
  249 000 square metres of deep patching
  941 000 square metes sprayed with asphalt
  Subgrade stabilization done on 30 km of Gravel Surfaces
- Materials used included:
  15.8 million litres of liquid asphalt
  25 400 tonnes of bituminous mix
  395 000 tonnes of crushed aggregate
  15 000 tonnes of screened aggregate
  7 500 tonnes of salt for ice and snow treatment
  443 km of gravel highways dust treated with CaCl2
- Contracts Tendered:
  Four contracts for blading 650 km of gravel surfaces on logging roads.
  Four contracts for blading of 522 km of gravel surfaces (Highways)
  Ten contracts for mowing of 6078 hectares of right-of-way
  One contract for rubber asphalt crack sealing

Also contracted were 201 000 tonnes of repair aggregate and 16,000 tonnes of bituminous mix

- Permits issued for private works on or near the rights-of-way included:
  100 permits for utility crossings
  30 permits for approaches
  17 permits for private signs
  20 building permits
- An additional four sign corridors were established
- The winter hotline handled over 4,654 calls from November to March
- The repair depot in Prince Albert provided service for 450 units

Construction

- Construction included:
  24 contracts supervised, 41.5 km of subgrade construction completed and 116 km of surfacing completed.
- Surfacing included:
  64 km of resurfacing as part of the department's rehabilitation program including three end product contracts.
- Crews supervised 272 km of seal coat involving two contracts.
- Major reconstruction projects included:
  Grading on Highway #3 from Mistatim to Crooked River; grading on Highway # 302 from Prince Albert to the west; surfacing on Highway #41 from Meskanaw to the Junction of Highway #20; surfacing of Highway #106 from the Junction of Highway #120 to the south; surfacing Highway #55 from north of Big River to the Junction of Highway #924; resurfacing #3 Highway from Prince Albert to Shellbrook; resurfacing Highway #35 from north of Tisdale to Nipawin.

Design

- Preliminary field surveys were undertaken at the Stony Rapids Airport runway extension.
- 25 km of subgrade design was completed on Highway #55 east of Nipawin and Highway #123 north of Highway #55.
- Lighting along Highway #2 between Air Ronge and La Ronge was designed and the installation was arranged.
- 7 delineation lights were installed at five intersections.
- Arranged for the installation of a non-directional beacon at the Sandy Bay Airport.
- 28 subdivision proposals were reviewed.

Materials

- Six rehabilitation designs, one comprehensive slope stability analysis, three geotechnical assessments were undertaken
- 21 pits were retested, surveyed and updated
  Four new gravel sources were tested
  59 gravel permits were issued
- 224 500 m^3 of gravel and 144 000 m^3 of sand were removed for department use
- The district lab completed 6,300 tests and evaluated four mix designs for surfacing projects.

North Battleford District

The following are the accomplishments of North Battleford District during the past year involving Maintenance, Construction, Design, Materials sections with support provided by district Administration.

Maintenance

- Maintenance activities were carried out by 27 section crews, 2 airport crews and 3 special crews.
- Normal road repairs included:
  2.6 million square metres of spot seal
  62 700 square metres of deep patching
  203 300 square metres sprayed with asphalt
- Materials used included:
  7.0 million litres of liquid asphalt
  24 100 tonnes of bituminous mix
  218 700 tonnes of crushed aggregate
  6 800 tonnes of screened aggregate
  8 000 tonnes of salt for ice and snow treatment
- Contracts tendered:
  Two contracts for blading of 57 km of gravel surface
  Three contracts for mowing of 4 380 hectares of rights-of-way
  Also contracted were 218 700 tonnes of repair aggregate and 27 800 tonnes of bituminous mix
- Permits issued for private works on or near the rights-of-way included:
  120 permits for utility crossings
  30 permits for approaches and roadside development
  6 permits for private signs
- An additional two sign corridors were established
- Winter hotline handled over 4,271 calls from November to March
- Repair Depot in North Battleford provided service for 320 power units and sundry equipment

Construction

- Construction included:
  17 contracts supervised, 42 km of subgrade construction completed and 39 km of surfacing completed.
- Crews supervised 362 km of seal coat involving two contracts.
- Major reconstruction projects include:
  Grading on Highway No. 304 west of Meadow Lake, Highway No. 903 north of Meadow Lake, and Highway No. 303 east of Lloydminster.
  Grading and surfacing on Highway No. 4 south of Meadow Lake.
  Surfacing of Highway No. 55 west of Meadow Lake.

Design

16 km of preliminary field survey was carried out.

17 km of subgrade design were completed; major design projects include Highway No. 4 south of Meadow Lake and Highway No. 55 east of Green Lake.

Materials

- Completed:
  Seven pits were retested, 100 resurveyed and updated.
  Two new gravel sources were located and tested.
  24 gravel permits for removal of 16 960 m3 were issued.
  312 950 m^3 of gravel and 41 760 m^3 of sand were removed for department use.
  6,216 individual tests on soil, aggregate and salt samples.

Highlights

- Turnouts for the installation of tourism signs were constructed west of the Battlefords and at Lloydminster.
- Seal coating of the runway, taxiway and parking apron on the Ile A La Crosse airport.
- Delineation lights were installed at four locations.
- Shareable work included:
  Funding was provided to help airport operation, runway and NDB maintenance at one community
- 23 subdivision proposals were reviewed.

Summary of Kilometres of Work Accomplished 1991-92

Control Section	Location	Dist.	Grading		Surfacing				
			Comp. (111)	U.C.	Pave. A (161)	Pave. C (141)	Pave. D (131)	Rehab. (181)	U.C.
1-02-00 A	West of Wapella to Whitewood	2						12.31	
1-03-00 A	At Whitewood	2						0.35	
1-08-00 A	White City to Regina (turning lanes)	2	2.41	3.20					5.61
1-09-00 A	Wascana Creek to Wascana Parkway	2	1.72		1.72				
1-10-00 B	Regina to East of Moose Jaw	2						39.82	13.20
1-10-20 A	Kalium Access	2							3.71
1-10-6L A	Jct. E1 & 6 (ramp) south of Regina	2						0.64	
1-14-00 A	West of Parkbeg to Secretan (sections)	1						3.44	
1-14-00 B	At Secretan	1						0.10	
1-14-00 B	Parkbeg East	1	2.00		2.00				
1-20-00 A	Gull Lake to Tompkins	1						20.65	
1-22-00 A	Alberta Border (deceleration lane)	1	0.30		0.30				
1-22-1B A	Welcome to Saskatchewan Site	1	0.20		0.20				
2-08-00 A	Tuxford to Buffalo Pound Lake	2	12.77	2.16				12.77	2.16
3-04-00 A	Mistatim to Jct. #23	6	3.08						
3-11-00 A	Shellbrook East	5						15.50	
3-11-00 A	Prince Albert West	5						10.49	
4-06-00 A	Kyle to Sanctuary	1						25.67	
4-17-00 A	South of Meadow Lake (shoulder widening)	6	15.30					15.30	
5-06-00 A	Watson to Muenster	4						31.60	
6-03-00 A	South Jct. #6 & #39 south	2						3.92	
6-04-00 A	Jct. #6 & #39 to Correction Line	2						18.15	
8-06-00 A	South of Tantallon to Jct. #22	3	17.83		10.70				7.13
9-12-00 A	Preeceville to Usherville	3			14.88				
11-03-00 A	Chamberlain to Aylesbury	2						0.88	16.63
13-06-00 A	West of Weyburn to Jct. #28 (sections)	2						10.69	
13-07-00 A	Jct. #28 west (sections)	2						16.34	
15-06-00 A	Leross to East of Punnichy	3			14.03				
15-12-00 A	East of Bounty to Jct. #42	1						11.73	
15-13-00 A	Jct. #42 West	1						0.47	
16-23-00 A	Southeast of Langham (aux. lanes)	4			1.04				
16-23-00 A	At Langham	4			2.76				
16-23-00 B	Langham Southeast	4			1.24				
16-23-1A A	Historic site at Langham	4			0.14				
16-23-30 A	Langham Scale Site	4			0.59				
16-29-00 A	West of Paynton	6						0.60	
21-01-00 A	U.S. Border to South of Jct. #13	1	15.00			13.20			1.80
21-07-00 A	At Leader South of Jct. #32	1						0.20	
21-07-00 A	Mendham Access to Leader	1			12.40				

Control Section	Location	Dist.	Grading		Surfacing				
			Comp. (111)	U.C.	Pave. A (161)	Pave. C (141)	Pave. D (131)	Rehab. (181)	U.C.
21-08-00 A	At Leader North of Jct. #32	1						0.80	
21-09-00 A	Kindersley South	1			10.00				
31-04-00 A	Salvador to Denzil	1	13.32						
32-04-00 A	At Leader East of Jct. #21	1						0.50	
35-07-00 A	At Qu'Appelle Underpass	2	0.43						0.43
35-15-00 A	Jct. #335 South	5						7.56	
35-16-00 A	Jct. #335 to South of Nipawin	5						27.67	
39-04-00 A	Midale to Halbrite	2						15.59	
39-06-00 A	West of Milestone to North Jct. #6 & #39	2						3.95	
41-01-00 A	Meskanaw to Jct. #20	5			15.00				
47-01-00 A	Estevan South	2	5.58						
48-03-00 A	West of Kipling to East of Jct. #47	2			26.55				
49-03-00 A	Preeceville to Hazel Dell (shoulder widening)	3	19.08					19.08	
55-10-00 A	Shellbrook to Canwood (sections)	5						3.90	
55-12-00 A	Jct. #924 South	5			16.36				
55-13-00 A	Jct. #924 North	6			0.50				
55-15-00 A	Jct. #4 West	6						23.54	
106-01-00 A	Jct. #120 South	5						11.89	
265-01-00 A	East of Jct. #926 East	5	3.33						
302-02-00 A	Prince Albert West	5	12.00						
303-02-00 A	Lloydminster East	6	10.86						
304-01-00 A	West of Meadow Lake to East of Makwa	6	16.35						
305-02-00 A	Jct. #16 East (Langham)	4	0.55		0.55				
312-01-00 A	West of Jct. #225 to Rosthern	4	11.09						
317-02-00 A	South of Cactus Lake South	1	13.76						
342-01-00 A	Beechy to Jct. #42	1	10.87						
349-10-00 A	Archerwill East	3	11.85			11.85			
361-12-00 A	East of Jct. #9	2	4.45						
903-03-00 A	Parker Lake North	6	12.30	4.10					
903-03-00 A	Canoe Lake to Parker Lake	6	15.30						
929-01-00 A	Sawn/Mahigan Road	5	5.00						
943-01-00 A	Sawmill West Road	5	26.40						
			263.13	9.46	129.96	25.05	11.89	354.21	50.67

Location	Grading		Surfacing				
	Comp. (111)	U.C.	Pave. A (161)	Pave. C (141)	Pave. D (131)	Rehab. (181)	U.C.
District 1	55.45		24.90	13.20		63.56	1.8
District 2	27.36	5.36	28.27			135.41	41.7
District 3	48.76		38.61	11.85		19.08	7.1
District 4	11.64		6.32			31.60	
District 5	46.73		31.36		11.89	65.12	
District 6	73.19	4.10	0.50			39.44	
Total	263.13	9.46	129.96	25.05	11.89	354.21	50.6

Control Section – A permanent unit of the highway system which becomes the basic reporting unit for construction and maintenance costs, service life characteristics, and various other data.

Grading - Completed (Comp.) – Grading completed within the year being reported.

Grading - Under Construction (U.C.) – The under construction portion of the project which is being carried over to be done in the next construction season.

Rehabilitation – Work such as pavement re-surfacing, carried out to restore a roadway to the standard to which was constructed. This is warranted when maintenance operations are no longer adequate or appropriate. Differs from upgrading in that the design standard is not improved.

Pavement "A", "C" and "D" – Represents different types o surfacing structures.

Surfacing - Under Construction (U.C.) – The paving of the project which is being carried over to be done in the next construction season.

Engineering Division

Engineering Division staff focus engineering knowledge standards and services for the development and maintenance of the transportation systems.

Engineering expertise provided includes:

- Geometric design and traffic engineering
- Equipment fleet management
- Maintenance engineering
- Pavement management
- Bulk commodity transport
- Testing and materials
- Rail transport

Details of specific services and accomplishments are provided in the following individual branch reports.

D.G. Metz
Executive Director
Engineering Division

Bernhard H. Wiens
Minister
Highways and Transportation

J.R. Sutherland
Deputy Minister

Don Metz
Executive Director

Al Popoff
Design and Traffic
Safety Branch

John Palaschuk
Equipment Branch

George Stamatinos
Surfacing
Branch

Barry Martin
Maintenance Branch

Al Widger
Geotechnical and
Materials Branch

Bernie Churko
Transportation
Systems Branch

Equipment Branch

Equipment Branch's mandate is to provide policies, standards, specifications and expertise for the purchase, maintenance, repair and disposal of the department equipment fleet; to provide a service to equipment users on all equipment needs and to provide information and data for fleet management. Major areas of responsibilities are:

- Develop the annual equipment budget.
- Purchase all equipment and related items.
- Manage and operate the department's equipment management. Information System (EMIS).
- Analyze fleet trends and provide information and data on fleet management.
- Develop policies standards and procedures related to the purchase, repair, maintenance and disposal of equipment.
- Set rental rates for department owned equipment and for equipment used on Saskatchewan Highways and Transportation contracts and projects.
- Administer the department's mobile/radio telephone communications system.
- Provide technical guidance and expertise on matters related to the equipment fleet.
- Administer the department's fleet of C.V.A. vehicles.

The department's current fleet consists of 2,196 units, including trucks, tractors, graders, mowers, compactors, sweeper brooms, trailers, camp equipment and heavy construction equipment.

Fleet Operation

The cost of operating the department's equipment for the year was $20.2 million. Repairs cost $6.3 million, fuel and other operating costs $5.6 million, ownership costs were $3.4 million and $4.9 million was spent on administration. The cost of operating the fleet was 2.9% lower than in 1990-91.

Equipment Purchases

In 1991-92, the equipment budget was $4.52 million. Of this total, $3.8 million was expended on new equipment acquisitions. The remainder of the budget was expended on preparing new equipment for field use, modifying existing equipment, purchasing shop equipment and tools and for emergency purchases. 55 requisitions were raised to purchase major equipment, support equipment, shop equipment and tools. The current capital cost of Saskatchewan Highways and Transportation equipment fleet is $72 million.

Rental Rates

The force account rental rates in 1991-92 remained the same as in 1990-91. A notice of approval was distributed to some 300 contractors, equipment dealers, trucking firms, towns, cities and other government departments and agencies.

Rental rates for department owned equipment were calculated on a provincial basis. The 1991-92 rental rates were 1.5% higher than the previous year.

C.V.A. Fleet

Central Vehicle Agency supplied a total of 375 units to the department. Units supplied were cars, vans, suburbans, and trucks up to one ton. 160 of these were classed as "A" units in which the department pays back C.V.A. a monthly leasing charge and is responsible for maintenance and repair costs. 225 units were leased on a per km basis where the department pays for the units based on the number of km driven. C.V.A. is responsible for maintenance, repair and operating costs.

Equipment Management Information System (EMIS)

The EMIS Users Support Committee carried out an extensive review of the equipment system that has been in use since 1983. As a result of the review, the system has been approved for replacement in the next three to five years. Due to the decision to replace the existing system the Users Support Committee was disbanded in September, 1991.

SAS has been used extensively to extract a variety of data from EMIS. The data has been used to analyze various fleet rends in the following areas:

- Fleet size
- Aging
- Age vs. usage
- Utilization
- Repair and Operating Expenditures
- Repairs by Components

Further analyses is being carried out on optimizing equipment replacement times. This will be discussed with district management during the upcoming year.

The preventative maintenance program has been implemented and is in operation.

A report has been developed which identifies annual repairs which exceed 20 % of replacement cost.

Geotechnical and Materials Branch

Branch Mandate

To provide current geotechnical and materials policies, standards, specifications, procedures, testing and engineering expertise for the planning, design, construction and maintenance of the provincial highways, roads and airports; and to provide central laboratory services, specialized field sampling and data collecting for a safe efficient and effective transportation system for the Province of Saskatchewan.

Standards and Policies

Work continued on many studies related to geotechnical standards and policies. Research and monitoring were continued in the area of Seal Coat construction and performance for the Flying Stones Study.

The asphalt cement and cutback specification was enforced using the new pay adjustments. The new general provision for purchase of asphalt and new terms and conditions of tender and supply was updated. A new system was put in place to select salt samples for testing to give better salt specification enforcement.

Major work continued on revisions to the standard test procedures required for End Product Specification and a new End Product Specification for base course was written.

Lab Services

Renovations were completed in asphalt area of the lab to improve utilization of space and equipment and air quality was improved in the liquid area by the addition of an air conditioner.

The department central lab conducted more than 16,000 tests to evaluate materials for highway design, construction, maintenance and research. Tests were completed on 1,600 asphalt product samples to check for specification compliance. Lab testing was conducted for several special studies.

The central lab provided all laboratory services for Regina district as well as asphalt mix designs for Swift Current district. A total of 18 Marshall Mix designs were prepared. Specialty testing of asphalt mixes was provided for all districts. Salt testing was decentralized to the districts but co-ordination and reporting remained with the central lab.

Site Investigation

Drilling was undertaken at eight sites to obtain design information and study possible movements. A total of 1 820 m of test holes were bored. Monitoring of instrumentation was continued at active sites. A new PC based Slope Indicator program was used to monitor slope movements. Five horizontal drains (260 m in total) were installed in a fill on C.S. 11-05 west of Aylesbury to remedy a settlement problem.

Surface Condition Testing

Benkelman Beam deflection tests were completed on 2 255 km of pavements resulting in a total of 19 900 tests. Additional sections were tested for urban assistance projects and for research purposes. Riding quality was assessed on 11 550 km of pavements and five runs on 8150 km of oil treated surfaces using the car road meters for a total of 52 300 km of testing.Special testing was done on SHRP , C-SHRP & other research sections.

Skid tests were taken on major bridge decks and overpasses to detect or study slippery conditions for safety concerns in addition testing was completed on research projects and SHRP/C-SHRP sites (plus custom work on Manitoba's sites.)

The California Profilograph was used to monitor construction on several new paving projects as well as assisting the districts with construction control. Training and support was provided to the districts in the operation of their new profilographs.

Staff Training

Training was given in the following classes:

- Maintenance Basic Soils (1 course)
- Maintenance Basic Asphalt (1 course)
- Nuclear Equipment handling and operation (1 course)

Environmental and Cultural Liaison

Geotechnical and Materials Branch continued its role as contact with Saskatchewan Environment and Public Safety to coordinate submissions and obtain project approvals.

Design and Traffic Safety Branch

The mandate of the branch is: To promote safe and economical provincial highways by managing the development of standards, policies and procedures governing geometric and hydraulic designs, roadway illumination, roadside development and traffic control devices; and to provide traffic engineering services and guidance to the department by managing data collection systems about traffic characteristics and special studies. To achieve this mandate the branch is responsible for the following activities:

A. Traffic Engineering

The Traffic Engineering Section provides traffic engineering services and guidance to the department and related agencies, manages traffic data collection systems for traffic characteristics and traffic accidents, develops traffic operations standards and performs safety studies.

Traffic Accident Information System

The Traffic Accident Information System (TAIS) has operated for 13 years providing detailed information about 481,000 traffic accidents to assist studying traffic safety. TAIS is used by various agencies to develop and monitor accident countermeasure programs.

4,000 traffic accident report summarizing the 1991 accidents were published and 1,000 posters and 10,000 pamphlets highlighting TAIS information were distributed.

A redesign of the TAIS was completed in 1991. It is the first Local Area Network based traffic accident system in North America to use the Unix operating system. Accident information is now more accessible and electronically available for analysis. Other changes were a redesign of the Motor Vehicle Accident (MVA) report form, procedures manual and a police training video.

Safety Improvement and Traffic Analysis Studies

The department emphasizes safety improvements on provincial highways. Improvements at problem locations and overall system safety improvements is an effective means of upgrading the highway to reduce accidents and casualties.

The Design and Traffic Safety Branch carried out 65 reviews and studies concerning traffic operational problems, speed zone requests and accident prone locations.

A "Traffic Control Device Manual for Work Zones" was developed and published to provide guidelines for uniform use of devices for traffic control at all work areas on or adjacent to highways. A manual is being developed to provide guidelines for traffic operation activities.

A traffic engineering course was offered to department staff and other interested agencies.

The branch gathers and analyzes comprehensive traffic information throughout the province. Traffic samples utilizing short term counts were taken at 852 of the 3,500 locations. The short term counts are calibrated by data from 39 permanent locations that operate continually through the year. The Traffic Engineering Section carries out special traffic studies, research projects and provides specialized assistance on matters relating to traffic characteristics. The equipment to gather traffic information has been upgraded to electronic systems technology. The data is processed, analyzed and managed using a desk top computer based Traffic Information System (TIS). The advancements in data collection have improved the accuracy of the traffic counting program.

B. Geometric Design

The Road Design Section provides engineering expertise with respect to geometric design, traffic operations, culvert hydraulics, roadway lighting, roadside management and roadway design software.

The section provided for delivery of roadway design training seminars to department staff. A Highway Capacity Course was offered to department staff in conjunction with Professor Sproule of the University of Alberta. In cooperation with users, a provincial Earthwork Design Computer Program (EMXS) users group was formed.

Progress was made in the review and development of standards in the areas of passing sight distance, intersection design, superelevation and truck braking distances. Standards were published for roadway lighting, along with minor updates to other standards. Evaluation and provision of computer software for modelling of low speed offtracking was completed.

C. Traffic Control Devices

The Traffic Control Section is responsible for the development and implementation of signing programs and policies. Special projects included the completion of a Traffic Accommodation Manual for Work Zones and the continued preparation of signing policies and programs to promote tourist facilities within the province.

The Traffic Control Section administers the Private Signing Regulations. *The Highways and Transportation Act* controls the installation of private signing adjacent to provincial highways.

This section is responsible for monitoring production, price, quality, durability, delivery, design, setting priorities and scheduling of the department's signing needs. 20,000 signs were ordered in 1991-92.

Maintenance Branch

The mandate for Maintenance Branch is protecting the transportation infrastructure and its users through maintenance engineering expertise and service.

Program Standards

The department maintained 25 715 km of highways in 1991-92. The system was composed of 10 284 km of staged or standard pavement, 1 770 km of light pavement, 7 795 km of thin membrane surface and 5 866 km of gravel. This system consisted of 749 km of four lane highway and two lane roadways were divided into 2 769 of arterial highways, 6 162 km of collector highways, 9 988 km of local highways and 5 298 km of provincial roads. The department also maintained 467 km of tourist facility roadways and sites, fourteen gravel airports and five paved airports.

The 1991-92 maintenance budget level of $89.157 million represented a 2.5% decrease from the 1990-91 budget level. Despite this the department met or exceeded its objectives for surface maintenance. The Riding Comfort Index on oil treatments significantly exceeded the 5.7 objective. This was achieved through continued use of the Sandvik grader blade on a motor grader to recycle existing oil treatments. The rain early in the year set back maintenance operations, but the hot and dry weather during most of 1991 was also a contributing factor in easily achieving the objective.

The winter of 1991-92 was relatively normal until late February then the required effort dropped off significantly. Usage levels for deicing chemicals and abrasives were slightly below the long term trend.

A major task for the branch was to develop reports and studies on the long term trends in maintenance. This included resource usage, accomplishments, and costs for major activities over the past five years. This information is necessary for future planning of the maintenance program and organization. The use of Geographical Information Systems for maintenance management was promoted by the branch.

Branch members were also heavily involved in the development of department information systems. This included the Highway Inventory System and Financial Management Information Systems. The branch helped develop a new highway classification system for better management and maintenance of the highway system.

Pavement Marking

The branch striped 23 653 km of centreline and 23 143 km of shoulderline. The total striping was 1 217 km or 3% above last year's total. By December 15th, over 98% of the highway system centreline was at the target service level. A total of 21 300 pavement signs (arrows, stop bars, etc.) were marked during the year using conventional paint. Two airports were striped during the year by a private contract.

The department designed and manufactured special equipment to apply a two component, long life paint (methyl methacrylate) which was used in routine production. Using this equipment the department continued its program of providing long life "permanent" markings in high wear areas near urban centres. In 1991 a total of 135 230 m of stripe were applied under both maintenance and capital funding.

Experimental striping operations were done with water-borne paints. Continued improvements here should lead to use of less solvent based paints to help the environment.

Weights and Dimensions

The branch head continued involvement with the

Interjurisdictional Committee on Heavy Vehicle Weights and Dimensions. National regulatory principles for straight trucks, truck-trailer combinations and inter-city buses were accepted by the Council of Ministers these and are being drafted into Saskatchewan regulations. The committee also continued dialogue with the U.S. border states on weight and dimension issues.

A major emphasis of the branch was to update policies on weight and dimension permits. Consultations were held with the waste disposal industry, the oil field industry, heavy equipment haulers and power line companies. Revised policies should reduce paperwork for industry and improve control of permits to protect the highways.

Surfacing Branch

The mandate of Surfacing Branch is to develop and review surfacing policies, annual and long term pavement rehabilitation program needs, gravel location resource information, pavement riding quality information, pavement material quality control information and to provide consultative services on pavement design, construction and maintenance.

Pavement Rehabilitation Program

Annual pavement rehabilitation programs were developed for a two year period from panel rating information collected from the field assessment of 1425 km of highway. The annual program developed by the branch consisted of approximately 331 km of highways to be rehabilitated at a cost of $27 million. The program also included approximately 594 km of rehabilitation seal coats.

Standards and Policies

Three End Product Specification (EPS) contracts were tendered in 1991 as a continuation of the pilot project. The work involved the placement of asphalt concrete rehabilitation overlays on highway No. 35 north of Tisdale, No. 3 east of Shellbrook and No. 3 highway west of Prince Albert. The later project was the first EPS project involving pavement recycling technology. The pilots proved successful and as a consequence additional EPS type rehabilitation overlay projects are planned for the 1992/93 construction year.

The branch initiated procedures for correlating the Spring Pavement Condition Rating Panels with the Pavement Universal Rating Device (PURD) for future inclusion within Pavement Management Information System (PMIS). The effort concentrated on establishing a correlation between the Rehabilitation Panel ratings and the PURD ratings. The next step will be to establish pavement distress prediction models from the broad system data collected by the PURD.

The branch introduced a new Pavement Rehabilitation Standard to the department which will allow for the reconstruction of more.

Sand and Gravel Policies and Standards

The branch is responsible for sand and gravel location policies and standards. The Acts, Regulations and Policies governing sand and gravel are presently under review to reflect current needs and practices.

Administrative Section

The mandate of the administrative section is to provide knowledge, support and timely assistance to Engineering Division through specialized administrative services in the areas of drafting, secretarial services, data entry, budgeting, electronic technology and by coordinating the airphoto program, gravel resource inventory, and roadside development applications.

Airphoto Library

There were two contracts for airphoto work in 1991-92. Library staff acquired 1 027 km of photography and prepared 281 mosaic sheets.

There is a continued ongoing program to update photography of our provincial highway system. Current photographs are necessary for highway planning, design and construction.

Roadside Development

99 roadside development and 117 approach permits were issued, in addition 154 subdivision requests were reviewed.

Gravel Resource Inventory

The division has information on approximately 4,115 gravel and sand areas in the province. The department owns and leases approximately 1,852 gravel pits which are used on the tendered construction contracts.

Transportation Systems Branch

The mandate of the branch is to develop and recommend policies, administer programs, and provide specialized technical assistance leading to improvements in cost effectiveness, safety and adequacy of surface transportation systems.

Road Section

Bulk Commodity and Timber Transportation Policy

The Road Section staff made several major revisions to Truck Haul Operating Plans from existing agreements to new vehicle configurations, weight and dimensions adjustments and road fees. These included revisions pursuant to the Cameco, International Minerals and Chemicals Corp. (Canada) Ltd., Potash Corporation of Saskatchewan. In addition to the ongoing administration of all of the industrial truck haul agreements, staff responded to several inquiries regarding possible new hauls. Some of these discussions were extensive and are still ongoing.

Overlength Vehicle Program

There are 13 carriers participating in Saskatchewan's Long Combination Vehicle (LCV) program. Staff continued to administer these agreements and monitor the performance of all carriers in the program. In addition to the ongoing administration, staff completed a study of the permissable operating hours on both two and four-lane highways. At the conclusion of the study, a decision was made by the department to increase the operating hours available to LCV carriers on most approved routes.

Interim Weight and Dimension Adjustment Program

This program enables commercial carriers to obtain permits to operate 7 and 8-axle "A" and "C" trains at weights of up to 62.5 tonnes, depending on the type of trailer hitching hardware that is used. A decision was made to increase the gross vehicle weights on 7-axle "A" and "C" trains from 55.6 tonnes to 57.7 tonnes. Permits for these units were adjusted to reflect this decision.

Aggregate Transportation Policy

The department has entered into several agreements with rural municipalities enabling them to obtain permits for crossing provincial highways while hauling gravel at weights in excess of legal limits.

National "C" Dolly Specification

Staff assisted with drafting weight and dimension regulations for "C" trains to operate at a gross vehicle weight of 58 500 kg.

Transportation Technology Development Program

The road section administered the road segment of the Transportation Technology Development Program which is designed to encourage the private sector to pursue new technologies for the movement of bulk commodities on the highway system. The thrust of the program is to improve safety, productivity, and extend the service life of the highway infrastructure. Staff from the road section were involved with the following projects:

- Stabilizer Arm Tandem Dolly Convertor Project

  Staff continued to work with Advance Engineered Products Ltd., Westank-Willock, and Kleysen Transport Ltd. in the evaluation of a rear trailer stabilizer arm on a combination trailer unit equipped with a tandem axle dolly convertor. A report is anticipated in the 1992-93 fiscal year.

- Tri Axle Drive Power Unit

  Discussions are still underway with several carriers regarding the development of a highway tractor with three driving axles all located at the rear of the vehicle. The unique feature of the concept is that one of the rear driving axles is steered mechanically, a prerequisite for satisfactory performance of a power unit equipped with three driving axles. A prototype may be put in service next fiscal year.

- Auto Locking "C" Dolly

  Staff in conjunction with Advance Engineered Products Ltd. and Federated Co-operatives Ltd. have been evaluating a prototype locking device for self steering "C" dollies. This device senses vehicle speed at the wheel of the dolly convertor. A final report on the project is now available.

- Miscellaneous Vehicle Evaluation

  The road section held discussions with the private sector regarding the possibility of developing new concepts in the transportation equipment for the logging and petroleum industry. Several of these concepts could result in field demonstration projects in upcoming years.

Rail Section

Track Loading Study

A study to determine the maximum loading of low volume, slow speed prairie branch lines commenced in March 1990 in conjunction with the road/rail project. The study is examining specific structure strengths of unrehabilitated track under various load, speed and seasonal parameters. Data collection is ongoing and a preliminary report on the steel investigation has been prepared.

Branch Line Options Study

ADI Limited was retained to analyze the total transportation cost associated with alternative scenarios for operating several branchlines whose protection orders were rescinded by the federal government in 1990. The study will be completed in June 1992.

Western Low Sulphur Coal to Ontario Initiative

Western Canadian coal accounts for a small portion of Ontario Hydro's fuel consumption. An Action Committee consisting of the Deputy Prime Minister and the premiers of Ontario, Saskatchewan, Alberta and British Columbia was formed to investigate ways of increasing the use of Western Canadian coal by Ontario Hydro. An Intergovernmental Secretariat to the Action Committee commissioned numerous studies looking at the feasibility of improving the competitiveness of Western Canadian coal. The rail section, on behalf of Energy and Mines, participated in several intergovernmental studies looking at coal transportation costs and attempting to identify areas where these costs could be reduced. The results were presented to the Secretariat in 1991-92.

Transportation Technology Development Program

The road/rail power unit was constructed and put into grain service with Southern Rails Cooperative Ltd. A patent license agreement was signed with Brandt Road Railer Corp. to construct and market the road/rail vehicle.

With assistance from the rail section, Southern Rails Cooperative Ltd. (a producer owned co-operative) purchased the Avonlea South Subdivision (Avonlea to Parry) from CN Rail and the Colony Subdivision (Rockglen to Killdeer) from CP Rail and commenced shortline operations. The federal government continues to fund the operation. An interim report evaluating the Southern Rails operation was completed by Travacon Research Limited and Edmar Services Inc. The report indicated that Southern Rails was providing better and less costly service to its customers than previously provided by CN and CP.

Several producer groups adjacent to branchlines threatened by abandonment approached the government for assistance to join the Southern Rail project. Negotiations with the federal government to fund the expanded operation were initiated.

Transportation Planning and Research Branch

Bernhard H. Wiens
Minister
Highways and Transportation

J.R. Sutherland
Deputy Minister

The mandate statement of the division is "Working together to shape Saskatchewan's future through excellence in transportation planning, research and services".

The goals of the division are:

- To develop and manage a comprehensive transportation plan.
- To provide high quality transportation expertise, advice and service.
- To lead practical transportation research and development.
- To develop effective, response and proactive transportation policies and programs.
- To promote expertise, innovation, achievement and pride.
- To communicate and consult openly and effectively.

Commercial air activities affecting Saskatchewan were monitored and assessed, and appropriate strategies developed. Initiatives for the development of local airport authorities in other provinces as well as other initiatives for greater local involvement in the management of federal airports were reviewed and assessed. The branch represented the province at the briefing meetings with Canada's negotiators to the Canada - U.S. Air Bilateral negotiations.

The physical distribution and transportation advisory program continued to identify deficiencies in the present physical distribution and transportation methodologies at user levels, and provided advice on alternatives to overcome the deficiencies.

Discussions were held with officials of other western provinces and the National Transportation Agency concerning surveys to monitor the performance of the National Transportation Act.

Assistance was provided in the preparation of various publications on grain transportation in Saskatchewan.

Departmental and transportation interests were represented with respect to disposition of abandoned railway rights-of-way, Treaty Indian land entitlements, and handicapped persons transportation.

The division was actively involved on policy issues related to the environment. Membership was maintained in the provincial technical review committee.

The division continued in its participation in the National Highway Policy with the federal and provincial governments. In addition, a new approach was developed with respect to the capital program development which recognized reduced resources. Activity was also continued on the Saskatchewan Rural Region Highway Planning Study.

Technical and administrative support was provided to the Interdivisional Committee to Prioritize Research. This committee was established to coordinate all research within the department.

Joint research with the Canadian Strategic Highway Research Program at the pavement test track fully utilizes its facilities.

There was continued involvement with the International Strategic Highway Research Program (SHRP). Six pavement test sections have been selected in Saskatchewan to study long term pavement performance. Two sites were also chosen to study the effect of maintenance practices.

The division coordinated the department's activities on the Canadian Strategic Highway Research Program. Three sites for this program are located in Saskatchewan. These sites will be monitored for traffic and in situ pavement conditions which will then be further analyzed.

Planning Support Branch

The role of Planning Support Branch is to improve the Saskatchewan transportation system by planning, developing and monitoring policies and programs of northern transportation and other special transportation issues, co-ordinating the development of legislation, and providing division administrative support. The subsequent goals for the branch are:

- To provide high quality transportation expertise, advice, and support for the northern component of the comprehensive transportation plan.
- To provide effective and responsible policies and programs for specialized transportation needs.
- To provide administrative support services for the division.
- To provide expertise, innovation and achievement within the branch.
- To communicate and consult openly and effectively.

During the year, the primary activities for Planning Support were:

Northern Transportation

A study was conducted on the 1991 freight haul by barge into Saskatchewan Lake Athabasca communities. In 1991 these communities generated about 6500 tons which were hauled by two barge operators. Stony Rapids had the greatest amount of freight at 2564 tons. For comparison, the tonnage on the system was 8543 and 8369 in 1990 and 1989 respectively. Further tonnage levels are expected to remain at 1991 levels unless there are special construction projects in the region.

The branch co-sponsored the Athabasca Region Transportation committee. This committee provided liaison and dialogue between the Prince Albert Tribal Council and various provincial and federal agencies. Particular emphasis of the committee was given to the planning of road development to Athabasca region communities that presently have no road access to the southern road network.

The long range program for the upgrading of northern roads and airports was updated. This program includes new roads and airports and the reconstruction of existing facilities. Co-ordination was maintained with Transport Canada on airport facilities and navigational aids so that federal and provincial activities would be compatible.

Interdepartmental Liaison

Liaison was maintained with federal and provincial agencies on various issues. This liaison enabled the department to deal more effectively with transportation issues.

The branch was actively involved on environmental issues related to transportation. Membership was maintained in the provincial technical review committee. Technical environmental reviews within Highways and Transportation were coordinated for all projects submitted to Environment and Public Safety.

The branch co-ordinated departmental interests in provincial crown lands which were selected for Treaty Indian land entitlements. This generally was related to provincial highway rights-of-way and gravel pits, although there was some involvement in broader policy issues. Federal and provincial airport planning was coordinated with Transport Canada.

The branch provided planning expertise and co-ordination for the province and the department on issues related to handicapped persons transportation. Support was given in co-ordinating federal/provincial meetings.

Statutes and Regulations

This branch contains the Legislative Officer and consequently is responsible for co-ordinating proposed department legislation, regulations, orders-in-council, and other cabinet agenda items.

Additional work was conducted with the assistance of the Department of Justice on the development of a new Highways and Transportation Act. The proposed new act is intended to replace the existing Act which has become out-of-date.

Development was conducted on a new provincial highway designation regulation. This regulation is intended to encompass all public highways presently being maintained and operated by the Department of Highways and Transportation.

Transportation Policy Branch

The focus of the branch is to:
- develop effective and responsive multi-modal policies, advisory programs and services.
- provide excellence in the delivery of policy, advice, programs and services.
- initiate and manage economic policy research and development.
- communicate and consult with our stakeholders in an open and effective manner.
- promote expertise, innovation and achievements.

During the 1991-92 fiscal year the branch maintained liaison with federal and the other provincial and private sector agencies dealing with transportation. The branch was involved in several major activities.

Air

The branch is responsible for influencing and improving the level and quality of commercial aviation services and infrastructure affecting Saskatchewan.

During 1991-92 branch staff were involved in the following major activities:

- Review and assess initiatives for the development of local airport authorities in other provinces as well as other initiatives for greater local involvement in the management of federal airports.
- Monitor the implementation of the federal government's Airport Transfer Management Policy.
- Monitor air services to northern Saskatchewan.
- Monitor and assess commercial air carrier activities affecting Saskatchewan and where necessary developed specific departmental and government strategies.
- The branch represents the province at the pre and post briefing meetings with Canada's negotiators to the Canada-US Air Bilateral negotiations.
- Monitor and assess all Notices, Decisions and Orders of the National Transportation Agency respecting commercial air carrier activity in Saskatchewan.
- Participate in the development of Transport Canada infrastructure in Saskatchewan through regular involvement in Saskatchewan Air Facility Meetings. The department is also represented on the Saskatoon and Regina Airport Consultative Committees.
- Meet regularly with Saskatchewan Aviation Council, Saskatchewan Outfitters Association, Saskatoon Airport Economic Development Board, Chambers of Commerce and Boards of Trade to discuss aviation related issues.
- The branch represents the department on the Transportation Association of Canada's Aviation Committee and on a number of committees as an Associate Member of the Air Transport Association of Canada.

Physical Distribution And Transportation Advisory Program

This program provides a centre of expertise and up to date information regarding goods distribution into, within and out of Saskatchewan. The objective is to reduce costs to Saskatchewan shippers, receivers and carriers. The goals of the program are to assist Saskatchewan business in maximizing their efficiency and profitability and to enhance the development of new domestic, export and import markets through utilization of physical distribution management techniques.

During 1991-92 branch staff were involved in the following major physical distribution activities:

- A priority of the program is to identify deficiencies in the present physical distribution and transportation methodologies at user levels, then assisting and advising of alternatives that overcome the deficiencies.
- Maintained active memberships in national and international associations.
- Provided consulting services to other departments, shippers, receivers and carriers on physical distribution matters.
- Distributed two updates to the Physical Distribution and Transportation Advisory manual.

Rail

The branch is responsible for influencing and improving the level and quality of rail service and infrastructure affecting Saskatchewan.

During 1991-92 branch staff were involved in the following major activities:

- Monitor and assess all Notices, Decisions and Orders of the National Transportation Agency respecting rail activities in Saskatchewan.
- Held discussions with officials of the western provinces and the National Transportation Agency concerning surveys to monitor the performance of the new National Transportation Act.
- The branch represents the province at the Transportation Committee meetings associated with the federal government's Agri-Food Policy Review.
- The branch assisted in the preparation of a four page newsletter entitled "Grain Transportation - A Saskatchewan View" which was mailed to Saskatchewan farmers to inform them of the issues to be discussed at federally sponsored public consultation meetings. The discussion paper presents issues and options associated with rationalizing the grain handling and transportation system.
- The branch also assisted in the preparation of a 23 page booklet entitled "Grain Transportation Facts" which provides detailed information on the grain handling and transportation system and examines the impacts of proposed changes.
- the following tables provide information on the current status of Saskatchewan branch lines.

Rail Line Abandonment Applications Currently Active under Section 160 of the National Transportation Act, 1987

Railway/ Subdivision	Between Points	Track Miles	Status
CP Shamrock	Hak - McMahon	8.2	Application to abandon
CP Dunelm	Player - Simmie	24.9	Application to abandon
	C.P. Total Miles	**33.1**	

Rail Line Abandonment Between April 1, 1991 and March 31, 1992

Railway/ Subdivision	Between Points	Track Miles	Status
CP Shamrock	Tyson-McMahon	24.9	Ordered abandoned Dec.17, 1991
CP White Fox	Meath Park-Sharpe	9.8	Ordered abandoned June 5, 1991
	C.P. Total Miles	**34.7**	

Capital Program Planning Branch

The focus the branch is:

- to identify and assess present and future demands for provincial highways, provincial and municipal airports, urban transportation assistance and rural transit assistance in Saskatchewan.
- to develop, monitor and evaluate strategic and short-range responses to these demands in terms of capital programs.

Major activities:

Capital Programming

The proposed five-year construction program was reviewed and developed for the period 1992 to 1996. A significant amount of consultation with the districts and other Head Office branches was employed to help focus and agree upon the needs and priorities for capital upgrading on the highway system.

The branch coordinated the submission of the 1992-93 capital program and budget to Treasury Board. As a result of the government's overall financial position the department's capital budget was set at $65.94 million. This represents a $18.5 million reduction from the 1991-92 level of $84.44 million.

A study to review the department's overall approach to capital programming was initiated by the branch with help and involvement from many other areas of the department. The need for the study was made evident by the reduction in capital funding and the mature status of the provincial highway system. One of the initial results from the initiative is a stronger emphasis being placed on spending available capital funds on those highways with the highest traffic volumes.

National Highway Policy Study

The branch continued to be actively involved in the National Highway Policy Study along with the other provinces and territories and the federal government. The work completed in 1991-92 included agreeing to a priority setting framework, preliminary programming scheduling and design and maintenance standards. Work is continuing to try and establish an appropriate and sustainable means of funding, an appropriate cost sharing formula and an effective and equitable implementation mechanism.

Planning Studies

A number of studies were undertaken or participated in by the branch.

The branch implemented a new functional highway classification system which better defines the purpose of the province's highways. The new system will enable the department to better set standards and policies related to the functional classification of the highway.

The Saskatoon Rural Regional Highway Planning Study was completed except for the final report. The study clearly shows the highway improvements needed now and in the future around Saskatoon. The advanced planning and computer tools used in the study will also enable the department to evaluate the impact of a major development on the highway system in the area.

Work continued on a study of the economic impact of highway expenditures. The results of this study will help the department to better understand the impacts to the provincial economy of reducing or increasing highway expenditures.

The branch continued to participate and provide advice for transportation studies in the cities of Regina and Saskatoon.

Grid Road Takeover Policy

A number of requests for takeover of municipal roads into the provincial highway system were evaluated. No new municipal roads were added to the provincial highway in 1991-92.

Professional and Technical Expertise, Advice and Information

A significant proportion of staff resources were utilized to provide specialist advice and assistance to senior management, other units of the department and extra-department units on matters related to highway planning, location and design standards, airport planning and classification, urban transportation planning, and policies related to capital programs.

Examples of such activities include the preparation of briefs, letters and background papers pertaining to the Saskatchewan Association of Rural Municipalities, Saskatchewan Urban Municipalities Association, Yellowhead Highway Association, Saskatchewan Roadbuilders, urban and rural municipalities, members of the public, and federal and provincial governments.

The branch maintains the highway-railway grade crossing inventory which is used to establish an annual list of candidates for installation of automatic signals.

The branch also compiled the annual lengths and expenditure statistics for Statistics Canada and Transportation Association of Canada and responded to numerous other information requests.

Technical Research Branch

Highlights And Accomplishments (1991-92)

Technical Research Branch focuses on "Advancing the department's Mission Through Technology Transfer, Research and Development".

Objectives and strategies for the branch were redefined this year as part of the Department's continuing strategic planning exercise. The branch's objectives are as follows:

- To manage practical transportation research and development,
- To promote and facilitate technology transfer,
- To provide quality technical expertise and advice, and
- To encourage innovation, achievement, communication and pride.

The branch participated in 36 department research projects, and three national and one international co-operative research programs.

New branch initiatives included:

- Development of a research project map identifying test section locations and describing each project, and
- Development of an Innovations Registry to document and disseminate information about new innovations developed by Department staff to assist them in being more efficient in doing their functions.

Materials Research

Materials research accomplishments include completion of three projects and continuation of data collection and evaluation on several others. Technical expertise was provided for materials related research activities undertaken by other branches within the Department.

Final reports were received for crack reflection analysis, polymer modified microsurfacing, soil suction and bearing capacity, and matric soil suction sensor projects. Data collection and performance evaluation also continued.

Transportation Research

Transportation research activities were focused primarily on supporting the co-operative research programs and non-materials related research within the Department. Data collection associated with transportation technology continued at the Estevan weighscale.

The areas of research were expanded to address problems with snow plow visibility, heat stress for equipment operators, environmental impacts of road salt, competitiveness of distribution systems, and vehicle emissions. Research continued with projects addressing driver and vehicle safety, sign reflectivity, transport compliance and economic impacts of highway expenditures.

Test Track

The department continued research and development activities at the pavement test track. The primary focus of these activities the "Bituminous Treated Road" project.

Technology exchange with the test track at the University of Canterbury (New Zealand) continued. The University acquired a prototype of the Saskatchewan developed acquisition system. Further enquiries about possible projects and the technologies available at the track have been received from New Brunswick, Quebec, Alberta and Texas.

Co-operative Research

The branch continued to support and coordinate co-operative research activity in the Canadian-Strategic Highway Research Program (C-SHRP), the US Strategic Highway Research Program (SHRP), the Transportation Association of Canada's Research and Development Council and the Canadian General Standards Board.

In addition to maintaining and monitoring the existing General Pavement Study and Specific Pavement Study sites, Saskatchewan established a Seasonal Monitoring test site on Highway No.16.

Technology Transfer

The branch's "Research in Review" newsletter continued to serve as an important forum for departmental research information. Branch staff also supported technical information exchange by conducting a tours of research projects, introducing new technologies to the Department, reviewing and disseminating technical information, and promoting areas in which the department has recognized expertise.

Regulation and Traffic Safety Division

Bernhard H. Wiens
Minister
Highways and Transportation

J.R. Sutherland
Deputy Minister

Bill McLaren
Executive Director

Dave Stewart
Director
Transportation
Legislation and
Safety Branch

Ron Blackburn
Director
Motor Carrier
Regulations
Branch

Barry Weafer
Director
Transport
Compliance
Branch

Phyllis Glowatsky
Director
Board Affairs
and Support
Services Branch

The Regulation and Traffic Safety Division is committed to excellence in motor vehicle safety and transportation services.

Under this mandate, the division performs support functions for the Highway Traffic Board by developing policy options for possible implementation, administering the daily functioning of the Board, and by requesting or implementing Board decisions.

The division is also responsible for the development, implementation and delivery of enforcement, safety and transport regulation initiatives for the department.

Applications for extra-provincial authority and non general merchandise intra-provincial authority continue to be processed in accordance with the reverse onus criteria. Applicants and all existing authority holders continue to be reviewed for the issuance of safety ratings under the National Safety Code.

Regulations necessary for the full implementation of National Safety Code standards in Saskatchewan continue to be developed.

W. R. McLaren
Executive Director
Regulation and Traffic Safety Division

Board Affairs and Support Services Branch

The Board Affairs and Support Services Branch has the responsibility for providing administrative support and services for the Regulation and Traffic Safety Division as well as the Board Secretariat functions for the Highway Traffic Board.

The administrative support for the staff of the division involves procurement of equipment, uniforms and supplies, invoicing, processing printing requisitions, controlling inventory, processing expense statements for members of the Board, monitoring budgetary allocations for the division and co-ordinating personnel related matters with the Human Resource Branch.

The Board Secretariat function for the Highway Traffic Board involves the planning, organizing, co-ordinating and managing of activities for the board members, such as:

- preparing agendas, files, policy proposals and other related material.
- planning, arranging and scheduling appeals on driver suspensions or SGI related decisions, public hearings related to operating authority applications and meetings to obtain public input or provide information.
- providing technical and professional advice and consultive services to solicitors, shippers, carriers and other respecting matters dealt with by the Board.
- preparing, distributing and implementing in a legally correct manner all Board decisions, orders or directives.

The Motor Carrier Committee held 22 meetings and handled 1,850 items.

The Traffic Safety Committee heard 76 appeals for restricted licences because of impaired driving suspensions. Appeals on medical and short-term suspensions imposed by SGI increased slightly, 18 appeals were heard (eight for medical and 10 for short term suspensions.

Motor Carrier Regulations Branch

The Saskatchewan motor carrier industry is subject to regulations designed to enhance freight and passenger services to Saskatchewan residents. The main program areas include:

Operating Authorities Section

Operating authority administration involves processing motor carrier applications for new authorities.

While the ease of entry process was introduced in 1986, the Board continues to receive a substantial number of applications: (1987/88 -299; 1989/90 - 251; 1990/91 - 172 and 1991/92 - 131). As well, all extra-provincial application and non general merchandise intra-provincial applications continue to be processed under reverse onus criteria. Since December 1989, the requirement of shipper support was eliminated for extra-provincial applications resulting in a significant increase in the number of reverse onus applications being processed.

The following statistical table shows the level of operations within the section:

Type	1987 /88	1988 /89	1989 /90	1990 /91	1991 /92
Ease of Entry	299	277	251	172	131
Reverse Onus	239	371	533	629	470
Public Convenience & Necessity	121	41	55	48	54
Total	**659**	**689**	**839**	**849**	**655**

Motor Carrier Fitness Section

One of the policies of the Highway Traffic Board is to promote compliance with all transport laws and regulations by those involved in the motor carrier industry.

A central registry of all transport law violations, along with a recording of the violators is maintained, and continuously reviewed. In accordance with predetermined levels, registration and/or authority holders are subject to action in the form of warning letters and counselling sessions.

During the past year, letters were forwarded to 25 carriers providing a brief description of the Compliance Review Program and procedures. The letter also requested that the carrier provide us with operational data to ensure our records were correct.

Carriers making new applications for authority had their records under the Compliance Review Program reviewed. Some carriers were asked to meet with the Board or the Compliance Review Committee as a result of it's compliance with transport law.

In accordance with the National Safety Code Agreement, some 124 Saskatchewan based carriers asked for and received the Certificate of Safety and Fitness which enabled them to obtain or renew their operating licenses in other jurisdictions.

Central Permit Office Section

The central permit operation has continued to service the motor carrier industry on a round-the-clock basis. Permit authorizations for operating authorities, fuel tax, vehicle registrations, and weights & dimension authorities are provided.

The Automated permit System (APS) commenced operation September 1989: this system is a joint venture between the Central Permit Office and the Weights and Dimension Permit Office. As of April 1, 1992 the two permit offices will be amalgamated under one management section in the Regulations and Safety Branch.

The combined APS operations, since 1983, has issued 527,655 permits generating $28,8104,437 revenue.

Year End	Number of Permits	Permit Revenue
1983	42,617	$ 1,946,298
1984	55,162	2,420,341
1985	54,956	2,679,605
1986	51,141	2,676,057
1987	55,966	3,154,117
1988	52,893	3,504,758
1989	63,744	3,902,356
1990	74,286	4,232,566
1991	76,890	4,294,339
Total	**527,655**	**$ 28,810,437**

Transportation Legislation And Safety Branch

This branch continued to develop motor carrier policies, taxation and legislation. The branch is divided into four sections.

In 1991-92 two of the major projects in the branch were the development of recommendations to Cabinet regarding greater access to US markets for Saskatchewan trucking companies; and the development of the design for a commercial vehicle driver and carrier profile.

Safety and Legislation Section

The section continued to co-ordinate legislative and regulatory developments for the division. The section developed proposed amendments to *The Highway Traffic Act* which were tabled in the Assembly in June 1991. The Assembly prorogued prior to completing its consideration of the amendments. The section began the development of further amendments towards the close of 1991-92.

The section continued to work with the Traffic Division of the Saskatchewan Safety Council. The section represented the department on an interagency committee on child restraint systems. In March of 1992, the section represented the department on the Saskatchewan Coalition on Bicycle Safety.

The section monitored the extent physicians were issuing medical exemptions from the requirement to wear seat belts. Initial indications are the number of medical exemptions is decreasing.

During 1991-92, the section participated in the development of regulatory initiatives to complete the implementation of the National Safety Code in Saskatchewan. By year end, draft regulations were under review by departmental staff and Saskatchewan Justice.

At the suggestion of Saskatchewan Justice, the section initiated revisions to how the Highway Traffic Board regulated rates under *The Motor Carrier Act*. The Board now establishes general merchandise freight and express rates, and bus passenger fares by Board Orders.

By year end, the section took over the process of co-ordinating the development of a new Highways and Transportation Act. This Act allows the department to construct and maintain the province's highway system and establish maximum weights and dimensions of vehicles travelling on the highways.

In co-operation with the Communications Branch, the section developed information sheets on safe operations of snowmobiles and all terrain vehicles. In November 1991, the department was an exhibitor in the Agricultural Ed Showcase at Agribition '91. Several thousand school children and adults viewed a departmental display emphasizing ATV safety and the Orange Zone.

Vehicle Registrations and Permit Section

This section is responsible for vehicle registration policies and legislation affecting 811,000 vehicles registered in Saskatchewan. This includes establishing the allowed uses and associated fees for various registration classifications.

Number of Vehicles

Description	Registered
Public Service	2,342
Rural General Merchandise	183
Commercial Vehicle C	13,882
Commercial Vehicle D	33,998
Farm Truck	158,754
Private Vehicle	493,673
Private Trailer	77,145
Commercial Trailer	13,181
Passenger PSV Bus	249
Passenger City Bus	409
Passenger School Bus	3,281
Taxi	653
Motor Toboggan	7,774
Licensed Auto Dealer	3,410
Licensed Trailer Dealer	101
Federal Government	2,024
Total	811,059

Program Development and Support Section

This section's main responsibilities are:

- develop and evaluate programs and provide research and analytical support to other sections, branches and the Board;
- provide advice on the design and development of information systems and recommend appropriate hardware and software for division owned systems;
- evaluate filed and prescribed rate proposals for freight and passengers, develop conditions of carriage and set insurance requirements.

As per shipper and carrier agreements, this section recommended an increase in general merchandise rates of 2.04% in March 1992. There was no increase in the previous six month period because of the combined impact of the GST credit, the decline in fuel price and low inflation rates. The fuel surcharge implemented in October 1990 as a result of the escalation in fuel prices due to the Gulf crisis was removed in April 1991 because of the fall fuel prices following the termination of hostilities.

Filed rates below the tariff for beer shipment were approved for several carriers for the contract year March 1992-February 1993.

Filed rates were also approved for operations in Northern Saskatchewan.

The Board approved exemptions from carrying full bills of lading for several carriers who utilize electronic bills of lading in truckload operations between terminals. Similar exemptions were granted for expedited couriers service.

Dangerous Goods Transportation Section

The Dangerous Goods Transportation Regulations have provided uniform standards for the means of containment of dangerous goods. This section monitors proposed changes in federal dangerous goods transportation regulations and provides input to ensure that any changes will not create undue hardship for existing industry.

The section trained and designated dangerous goods inspectors with Transport Compliance staff, Urban Municipalities and the RCMP.

Transport Compliance Branch

This branch is composed of the Saskatchewan Highway Transport Patrol and Transport Investigation Units who serve and police the road transportation industry.

For organizational purposes, the province is divided into two geographic regions. Within these regions, uniformed staff are employed to patrol the highways and to staff 14 permanent weigh scales. These activities are conducted around the clock. Investigative staff operate from Regina to Saskatoon. They conduct investigations into road transportation complaints and conduct audits on individual carriers.

The focus of this law enforcement group is to promote compliance with laws which protect highways and the people who use them and to govern the movement of vehicles, goods and passengers. Primarily, officers interface with the bus/truck industry, but they have the authority to promote highway safety for all vehicles by taking action on flagrant violations when encountered.

The primary responsibility is the enforcement of laws and regulations covering vehicle and driver safety, weights and dimensions and economic regulation (operating authority and registration). While carrying out their duties, staff conducted 242,804 inspections, 18,034 consultations and 1,204 investigations with industry during the year.

Summary of Inspections and Violation Rates (91/92)

Types of Inspection	Location of Inspections	Number of Inspections	Violation Rates
Economic Regulation	At Weigh Scales	22,998	5.9
	On Patrol	13,044	11.1
Weight and Dimension	At Weigh Scales	64,312	1.3
	On Patrol	7,848	15.7
Safety	At Weigh Scales	20,334	22.9
	On Patrol	14,268	37.6
Total Weigh Scale Inspection			**207,644**
Total Patrol Inspections			**35,160**
Total Inspections			**242,804**

Officers actively promote compliance with dangerous goods transportation laws on Saskatchewan highways. All officers are trained and certified as dangerous goods inspectors for Saskatchewan. Their duties include inspection of drivers, vehicles, cargo, documentation and the display of safety marks.

During 1991/92, officers conducted extensive inspections under the Commercial Vehicle Safety Alliance (C.V.S.A.) Program in Saskatchewan. This international organization is devoted to promoting safety commercial vehicles in Canada, the United States, and Mexico through roadside inspections. Vehicles which pass inspection are awarded decals which are recognized by other jurisdictions. Unsafe vehicles are placed "out-of-service" until necessary repairs are made. "Standard inspections" consist of 52 elements while "walk around inspections" include 23 elements.

C.V.S.A. Inspection Summary (91/92)

	Number Conducted	Decals Issued	Vehicles With Defects
Standard Inspections	2,049	1,044	1,210
Walk Around Inspections	7,795	N/A	4,023
Totals	**9,844**	**1,044**	**5,233**

In May of 1991, a concentrated enforcement blitz was conducted at the Lloydminster and Swift Current weigh scales. Members of the R.C.M.P. and employees of S.G.I. Safety Section provided assistance and support to branch staff during this undertaking. The blitz was successful in that unsafe trucks were taken out of service and/or repaired, thus ensuring safer Saskatchewan highways for all users.

Carrier Audits/Safety Reviews

1989 saw the introduction of a commercial carrier audit program with guidelines developed under the National Safety Code. Under this program 431 audits were carried out in 1991/92.

These audits review the carrier's record keeping with a view to increasing safety awareness. Driver qualifications, hours of service, vehicle maintenance and dangerous goods records are all examined by qualified investigators. The intent is to assist the carrier in establishing proper record keeping systems.

Recap of Charges and Written Warnings

Of the charges and written warnings issued during the year, approximately 40 per cent went to carriers and drivers based outside the province. This reflects the high level of trucking into and through Saskatchewan from other provinces and states.

Economic Regulation	
Operating Authority	460
Registration	2,732
Sub-total	3,192
Weight and Dimension	
Overweight	2,992
Overdimension	555
Sub-total	3,547
Vehicle and Driver Safety	
Dangerous Goods	218
Vehicle Offences	13,056
Driver Offences	3,474
Miscellaneous	197
Sub-total	16,945
Total	**23,684**

Support Services Division

Bernhard H. Wiens
Minister
Highways and Transportation

J.R. Sutherland
Deputy Minister

Support Services Division provides quality administrative and support services to the department through people committed to excellence in the work they do.

Functional services include:

- staffing
- personnel management and training
- financial management and control
- management and administrative systems
- computer services
- property acquisition
- property management

A great deal of effort by the division staff went into work during 1991 related to the Fair Share initiative.

Details of specific services and accomplishments are provided in the following individual reports.

P. Fitzel
Executive Director
Support Services Division

Paul Fitzel
Executive Director

Art Lowey
Property Services
Branch

Horst Arndt
Management
Services Branch

Steve Pillipow
Human Resource
Branch

Colleen Laing
Financial
Services Branch

Human Resource Branch

Focus Statement

Empowering excellence in human resource management to meet the needs and challenges of the people we serve.

Branch Functions

- To provide employee services.
- To administer and facilitate the department's industrial relations programs.
- To develop policies, standards and procedures related to human resource management.
- To identify training needs and to develop and deliver programs to meet those needs.

Labour Relations

During the year 51 grievances were received; 5 of which have been resolved and the remaining 46 are in various stages of the grievance process. In addition, 27 grievances were received in the previous year, five were resolved during the year.

Human Resource Management

Competitions were held to fill the following number of positions:

Public Service - 5

Labour Service - 44

Thirty employees requested a review of their jobs to determine if they were properly classified.

Training and Development

Department employees maintained their emphasis on performance improvement through several training and development opportunities. Developmental programs were provided through the following agencies.

Source	Employees Trained	Cost
Internal Conferences/ Seminars	1145	$ 1,470.00
External Conferences/ Seminars	1043	$199,050.27
PSC Conferences/ Seminars	137	$ 15,440.00

Although training and development activities were curtailed over the previous year, initiatives were developed for future implementation. Training strategies which will foster the principle of internal responsibility in the area of occupational health and safety will be in the focus of training activities in the up-coming year. The branch will further expand training programs as they relate to the safe operation and maintenance of the department's fleet of equipment.

Property Services Branch

Property Services Branch is responsible for:

- the appraisal and negotiation of land for various department programs;
- establishment of standard rates of compensation for land related damages negotiated by the branch and other department units;
- arranging for the legal survey services required for department right of way and public improvement projects;
- the registration of rights to property to meet the department's construction schedule and the Grid and Main Farm Access Road Program;
- payment for various related services and for land where title has been secured;
- the management of property rights under the jurisdiction of the department pertaining to public highways and public improvements.

1991-92 HIGHLIGHTS

- A total of 531 land and damage agreements were successfully negotiated on 51 highway projects. A high negotiation success rate of 99% was achieved.
- No claims for arbitration were filed with respect to right of way expropriated under The Expropriation Procedure Act and none of the six outstanding arbitration cases on file were active during the past year.
- The Property Services Branch Procedures Manual, was completed and the Support Services Division, Service Guide Manual, 1988 edition, was updated with respect to branch services, processes and contact people.
- The branch has achieved steady progress in information technology system development. The Property Services Information System (PSIS) now has over 10,500 records and seven reports have been developed to enhance the management and monitoring of the branch work program.
- A research project in the property management unit to identify and electronically record the ownership status of all original road allowances in the Province is now 23% complete. A total of 869 townships have now been researched and 2,906 road allowance closures have been identified and recorded.

1991-92 ACCOMPLISHMENTS

Plans of survey recorded (all types)	945
Road, public improvement and reference plans processed	345
Road, public improvement and reference plans registered	288
Provincial highway, public improvement and miscellaneous surveys contracted	45
Kilometres of provincial highway contracted	114
Consents and permits issued	1,495
Closures, abandonments and encroachments issued	162
Property agreements paid	695
Property agreements negotiated	531
Leases, grazing and cultivation permits issued	195
Highway right of way dedications acquired	41

Miscellaneous roadway research and land conveyance for following programs:

• Rail line abandonments	26
• Indian land entitlements	8
• Northern community land transfers	2
Miscellaneous information requests	400
Conversion of titles	1,256

Management Services Branch

Branch Overview

MSB's mandate is to "promote the effective use of information through the planning, provision, support, and management of information technology". A big part of this responsibility has been satisfied through the provision and support of an extensive Local Area and Wide Area Network (LAN/WAN). This network has grown to encompass six district offices, eight shops, the Central Lab, and head office (which has two LANs). Dial-in support to area offices means that areas can also share electronic mail services through the district LANs.

The branch provides significant support for applications running on the ISM mainframe and local Wang/VS minicomputers. Important systems such as Labour Service payroll rely on the expertise of MSB staff to operate successfully. This support comes in the form of branch operations staff and analysts that schedule production, resolve problems, adapt systems to new policies and operating software releases.

The branch provides an electronic "help desk" for support of hardware/software and applications. A single telephone number makes this service available. All calls are logged so problems can be resolved effectively.

MSB is also an important partner with users in the department for planning and administering acquisitions of computer software/hardware and consultant services. The branch liaises with the Purchasing Agency and the Information Technology Management Agency.

LAN/WAN

This past year saw the full implementation of the Local Area/Wide Area Network. The head office LANs were upgraded to provide faster response and throughput.

During the past fiscal year, the Wide Area Network (WAN) was expanded to include the area offices. Areas can now dial into the district offices to exchange electronic mail and to submit ISM jobs. The shops in Moose Jaw, Weyburn, and Rosetown were connected to the WAN.

Global Modelling

MSB adopted an "architectured" approach to developing software. To facilitate the sharing of information and its effective management, a global model of the business of the department was constructed. MSB acquired the Excellerator software engineering tool to capture information about business activities and underlying information needs and usage. The LGS Group was contracted to work with MSB in building these high-level models and to transfer skills to MSB staff.

Highway Inventory Project

During the year, MSB provided project leadership and business modelling expertise for the Highway Inventory project. This project was established to plan the replacement of the existing Highway Inventory System. The information collected during analysis was used to update the global models.

Information Technology Council

The Information Technology Council (ITC) was set up to "effectively manage the department's investment in information technology" on behalf of the executive committee. It provides a means of sharing decision-making on information technology issues and initiatives with users in the department.

Other Initiatives

The MSBulletin made its debut and became an important tool for passing on information on the status of the network, changes in procedures and policies, and general computer use information. The MSB Help Desk was enhanced by implementing the Micro Resource Manager package for tracking hardware and software. Calls were logged to facilitate problem resolution.

Financial Services Branch

Focus

To provide quality financial services and managerial information in a responsive and professional manner.

Responsibilities

The Financial Services Branch provided the following services to the department:

- financial planning
- budgeting and forecasting
- accounting
- financial statement and report preparation
- payroll processing
- financial and financial/operational systems reviews to ensure adequate controls and the accuracy of financial information
- inventory administration and purchasing
- briefing book and special report preparation
- mail services

Highlights

The travel expense claim form was computerized and a pilot project was begun in Regina to test the form and identify further options for improvement. When implemented, this form will significantly reduce the time required to process these claims.

A procedures manual was written by the staff in Accounts Payable for their unit. It provides guidance for each major function that the unit is responsible for.

Cost saving measures were implemented reducing departmental forms costs by approximately $10,000.

The Accounts Payable Unit achieved a 0% payment error rate for eight months of invoice processing during the year.

The department's public accounts information was streamlined to provide the required information in a more concise format.

In September 1991, the terms of reference for the Financial Management Information Steering Committee were approved. A project manager was hired in December with work beginning on the modelling of department operating functions shortly thereafter. The goal of this committee is to oversee the upgrading of departmental financial information systems.

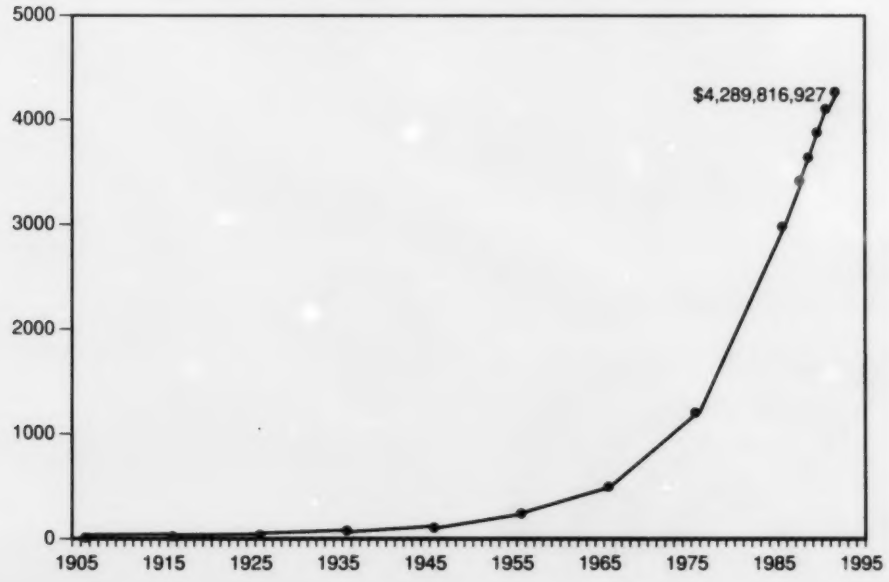
Appropriation and Expenditure 1991-92

Ordinary	Appropriation	Expenditure
Executive Administration Branch	$ 1,400,000	$ 1,361,757
Financial Services Branch	757,000	745,440
Human Resources Branch	850,000	794,986
Trans. Planning and Research Div.	2,155,000	2,016,708
Property Services Branch	760,000	720,193
Communications Branch	601,000	543,704
Operations Services Branch	1,318,000	1,182,537
Engineering Division	3,431,000	3,501,173
Bridge Branch	458,000	453,809
Swift Current District	1,328,000	1,325,167
Regina District	1,601,000	1,564,914
Yorkton District	1,199,000	1,189,873
Saskatoon District	1,058,000	1,073,331
Prince Albert District	1,658,000	1,573,326
North Battleford District	1,383,000	1,276,091
Management Services Branch	1,100,000	1,102,190
Grants	124,900	134,107
Regulation and Traffic Safety Div.	3,997,000	3,927,158
Payments to S.P.M.C.	9,525,000	9,478,771
Members of Exec Council (Stat)	27,400	21,356
	$ 34,731,300	$ 33,986,591
Maintenance	89,157,000	83,626,027
Subtotal	$ 123,888,300	$ 117,612,618
Capital		
Rural Surface Transportation	$ 82,726,000	$ 77,743,058
Air Transportation	610,000	506,179
Subtotal	$ 83,336,000	$ 78,249,237
TOTAL	$ 207,224,300	$ 195,861,855

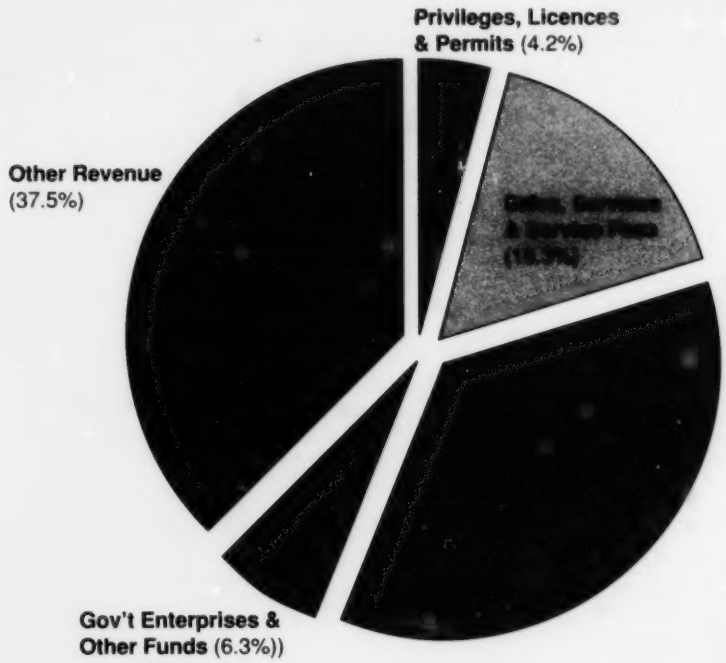
* The effect of virements is not reflected in these amounts

Accumulated Expenditures to Date

March 31, 1992



Revenue Collection



Expenditure Distribution